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Dr. Howell





A

E S S A Y

ON THE  
NATURE AND CURE

OF THE  
PHTHISIS PULMONALIS.

THE SECOND EDITION ENLARGED.

TO WHICH IS ADDED

AN APPENDIX

ON THE  
USE AND EFFECTS OF FREQUENT VOMITS.

---

QUOD SI MALI PLUS SIT, ET VERA PHTHISIS EST INTER  
INITIA PROTINUS OCCURRERE NECESSARIUM EST;  
NEQUE FACILE ENIM HIC MORBUS, CUM INVETER-  
AVERIT EVINCITUR.——CELSUS, LIB. iii. CAP. 22.

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By THOMAS REID, M.D. F.A.S.

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L O N D O N,  
PRINTED FOR T. CADEL IN THE STRAND.  
M DCC LXXXV.

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T O

THE RIGHT HONORABLE  
LORD FREDERICK CAMPBELL;

THIS ESSAY,

AS A TESTIMONY OF GRATEFUL  
RESPECT,

IS INSCRIBED,

BY HIS LORDSHIP'S

MOST OBLIGED

AND OBEDIENT

HUMBLE SERVANT,

THE AUTHOR.





## INTRODUCTION.

**C**ONSUMPTION of the lungs has been considered as peculiarly endemical to the inhabitants of this country, whether occasioned by the infinite variety, and sudden transitions of the climate, by our insular situation, or manner of living, separately or conjointly, is not easily determined. Where a disease occurs so frequently<sup>1</sup>, that few families are without melancholy

<sup>1</sup> In the London bills of mortality, the number said to die of consumptions, is generally between four and five thousand annually; exclusive of those not buried in parochial church-yards, and in every other part of the kingdom. Though the manner of forming these registers, is liable to such uncertainty, as calls loudly for reformation; and the term consumption is applied to many different diseases; yet it will serve to demonstrate, that a great number yearly die of this disease.

By a register of the parish of Holycross in Salop, from the year 1770 to 1780, kept by the Rev. Mr. William Gorsuch,

melancholy instances of its ravages, it might reasonably be expected, that something more than a palliative method of treatment, would have been discovered. But I fear it is an incontestable truth, that when it is confirmed, a perfect recovery seldom takes place.

The authors who have written upon diseases of the lungs, are numerous and respectable; each proposing a method of cure according to his idea of the cause, from whence the complaint originates in the constitution. These opinions have been so various, and so different from one another, that sometimes they appear more like the sportings of the imagination, than learned and scientific enquiries. One author accounts for the hectic fever<sup>2</sup> by

Gorsuch, it appears, that 311 died in the ten years by disease and casualties; out of which 62 died of consumption; 64 of a natural decay, without any apparent distemper, and 13 by accidents. So that the deaths by consumption is somewhat more than one in four. By an actual survey made in the year 1780, the inhabitants were 1113. Philosoph. Transf. vol. 72. for 1782.

<sup>2</sup> Robinson on Consumption.

supposing

supposing the strength of the muscles to be reduced faster, than that of the heart; and therefore nothing more is necessary for its cure, than diminishing the one, and increasing the other. Some others imagine it proceeds from animalcula in the lungs, and recommend mercury and steel<sup>3</sup>. But since the publication of the Phthisiologia by the learned Morton, the general opinion has been, that the hectic fever, and subsequent diarrhœa, were caused, by the purulent matter in the lungs being absorbed, and carried into the circulating fluids; and hence they have been termed putrid. This hypothesis has been adopted by the latest authors upon the subject, and I believe is received by the most eminent physicians of the present age. Though the practice founded upon the theory of putrefaction, is in some measure abandoned, yet the impression is not, by any means, perfectly removed; and the dif-

<sup>3</sup> Marten. Default. &c.

ease continues not less fatal, than it was formerly. How far the method, recommended in the following pages, may tend to remove this reflection from the profession, time only, and the experience of those who shall make trial of it will determine.

In the course of twenty years practice, in some degree extensive; and from particular reasons, having directed my attention in a special manner to complaints of the breast, I have had frequent opportunities of viewing the progress of Phthisis through all its stages, in every sex and age. And having observed with great regret, the inefficacy of the means usually employed in its cure, I have ventured, with great diffidence and respect, to lay before the public a method, I have for some years found more successful.

In my attendance upon the sick, maturely reflecting upon the various symptoms, and changes that took place in different periods of the disease, I have long been convinced, that the commonly-  
received

received opinion of absorption of matter from the lungs, and of that matter circulating in the blood vessels, by its acrimony and putrid quality, occasioning the fever attending this disease, has been too implicitly followed; and when investigated attentively, will be found to rest upon principles, that do not exist in the animal œconomy. However bold and decisive this assertion may appear, I trust, when I have produced my reasons in support of it, they will not only explain the origin of the hectic fever and diarrhœa accompanying Phthisis Pulmonalis, in a manner more satisfactory and consonant to what we know of the human body, than has hitherto been done; but at the same time equally absolve me from the imputation of temerity or presumption.

Whoever assumes to himself the office of informing others, ought assuredly to deliver the subject as it appears with conviction to his own mind; sincerity in that point, at least, is expected from him, however it may militate against the opinions  
of



of preceding authors. In so doing, whether his doctrine be founded upon just principles, or on the sandy basis of conjecture, he has fulfilled an indispensable duty which he owed to the public.

The mode of treatment I shall recommend, is founded upon experience; and is what has proved effectual in those periods of the disease, that are attempted to be pointed out with some precision. To do this with greater exactness, it may be thought, some instances of the disorder being cured should be related. But when it is considered, with what ease cases are drawn up every day to suit any theory; and that they must ultimately rest upon the same ground of veracity with the other parts of the work; they will be found evidences not deserving much credit.

Excuses and apologies from young authors, are become so common, so much a matter of course, that they have lost their designed effect: perhaps they do not always convey an idea of self-diffidence. The following Essay is published with a  
desire

desire to improve the manner of treating a dangerous, and too often incurable disease. If it should in any respect contribute to this desirable purpose, or suggest hints to those of greater abilities, apologies will be unnecessary. If on the contrary that should not be the case, it will meet with the contempt it deserves, and sink into oblivion with numbers that have gone before it.

In an age like this of philosophical enquiry, in which the human mind is daily enlightened by the rays of knowledge, I doubt not, but any attempt, however weak, to promote a science so essentially necessary to mankind, will be received with liberality, and judged of with candor.

NEWMAN-STREET,

April 17th, 1785.

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C H A P.

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## C H A P. I.

*Subject proposed—persons most liable to consumption—white teeth—danger of establishing uncertain criteria—origin and symptoms—first period—second period when confirmed—third period diarrhœa—weakness of the mind—termination.*

IT is not my intention to enter into a minute description of every particular symptom and predisposing cause of a pulmonary consumption: they are numerous and uncertain, and may be found with much greater accuracy, in almost every author who has written upon the subject. My design is, to take a succinct view of the general symptoms and progress of the disease; and of the causes which can be ascertained with the greatest precision: to consider the method usually pursued in the cure: and lastly, to offer such observations as have oc-

B

curred

curred in my attendance upon those labouring under this, too fatal disease.

In prosecuting a subject, that has employed the pens of so many eminent authors, it will be impossible to avoid sometimes using the same thoughts, and even expressions, without being conscious of it. But wherever I have availed myself of such assistance, I have been particularly careful in acknowledging it. This will account for the frequent quotations, which to some readers may carry an affectation of pedantry, or an exemplification of reading; both which are the most distant from my mind. And as it is probable I shall differ in opinion, concerning the cause and cure of this disease, not only with those of the past, but of the present age; I beg it may be understood, that I do it with that deference and respect due to their superior abilities, when brought in competition with mine.

Consumptions arising from various causes, have been differently denominated,

nated, viz. Symptomatic, Scrophulous, Scorbutic, Venereal, Hepatic, Asthmatic, &c.<sup>1</sup> The subject of the following pages will be confined to the true Phthisis Pulmonalis, or consumption of the lungs, usually preceded by tubercles, but sometimes by hæmoptysis or spitting of blood.

There is no branch of science in which precision is of more importance to the public in general, than in treating medical subjects; and in none more necessary than the present, where the beginning is so imperceptible, that it has been well observed by a learned author, “*Ut multos horum jugulet priusquam se fere aegrotare credunt*”<sup>2</sup>. I would define the Phthisis Pulmonalis when confirmed, to be an expectoration of purulent matter from the lungs by means of frequent coughing; attended with a

<sup>1</sup> Morton Phthisiologia. lib. 3. An. 1689.

Gideon Harvey Morbus Anglicus An. 1674, reckons up twenty different species of Consumption, among which are those from love and witchcraft.

<sup>2</sup> Clift. Wintringham Bar. Com. § 334. An. 1782.



fever of a peculiar kind, having morning sweats and remissions in the forenoon, occasioning a wasting of the flesh and strength.

This disease usually attacks people of a delicate, weak, tender constitution, having a great laxity of the muscular fibre and contracted thorax; and as such habits of body are peculiar to certain families; in such cases it may with some degree of truth, be termed an hereditary disease: but this, by no means, is to be understood in the same sense, as Gout, Scrophula, Lepra, &c. where it is scarcely possible, for the unfortunate descendant, whatever precautions he may use, to avoid being afflicted by the disease of his ancestors. It appears in persons of every age, but most frequently in those from fifteen, or about puberty, to thirty-five. But it sometimes happens that children are born with violent coughs, emaciated, and have died in the month, evidently of a confirmed Phthisis.

Young people who have grown fast<sup>3</sup>, who are tall, thin, narrow chested, of a delicate complexion and clear skin, are most obnoxious to pulmonary consumption. The projection of the scapulæ, commonly mentioned by authors as resembling wings, and characterising the disease, is occasioned by the narrowness of the thorax; the shoulders being thereby brought more forward, the scapulæ must necessarily project outward; it should not be considered as a symptom, but the effect of a predisposing conformation.

An ingenious author who has written the latest upon this subject<sup>4</sup>, has said, “ the whiteness and transparency of the teeth is the distinguishing characteristic, or a predisposition to it.” I must confess, though I have sometimes observed consumptive people have white and clear teeth, yet it has not been confined to

<sup>3</sup> “ *Adolescentes, qui pectoris et corporis ferè totius musculos graciles, tenues, et laxos habent, ut plurimum in tabem delabuntur.*”

Clift. Wintringham Bar. Com. § 28. An. 1782.

<sup>4</sup> Symmonds on Consumption, p. 13, An. 1780.

them: and since the first edition of this work, in all the patients afflicted with Phthisis I have attended, and they have not been few, I have not failed to look for this characteristic, but have been generally disappointed. How far a particular symptom can be, at the same time the characteristic of a genuine disease, and of a predisposition to that disease, I shall not pretend to determine<sup>s</sup>, but considered as a distinguishing mark, it appears to me liable to much uncertainty.

As the great danger in pulmonary complaints, proceeds from the patients being lulled, by their frequency, into a fatal security; fancying their disorder a common cold, easily to be removed by simple remedies; it becomes therefore a matter of the utmost importance to ascertain a criterion of the disease, a symp-

<sup>s</sup> “ The propensity to any particular state must  
 “ surely be short of that state to which it tends, and  
 “ incapable of giving that, which it has not itself  
 “ attained.”

Millman on Scurvy and Putrid dis. p. 57. An. 1782.  
 tom,



tom, by the presence or absence of which, the patients may be assured when they are, and when they are not in danger.

Whether it arises from their sedentary life, from the structure and conformation of their bodies, or from some other particular cause, females are more liable to this disease than males. How often do we observe the most beautiful, the most elegant of the sex, fall victims to this cruel malady! The mind participating, as indeed it always does, of the delicacy of their bodies, gives early marks of sensibility and uncommon acuteness in their understanding; and the weakness of their frame impresses a gentleness and softness in their manner, that greatly excites compassion and distress for their melancholy situation.

The present absurd fashion of dressing and introducing young women early into the world, as it is termed, before their bodies have acquired a proper degree of strength and firmness; and the mode of living among people in genteel and high life,

life, and even in middling stations (if any such can be found) is one great cause of the frequency of consumptions. But this will be more particularly considered in another place.

The origin of the genuine Phthisis Pulmonalis, may generally be traced from Hæmoptysis, or blood issuing from the lungs; from what is termed taking cold; and sometimes from external injuries. When the disease has made a certain progress, the indication of cure is nearly the same, however the symptoms may have differed in the incipient state.

A cough more or less troublesome at night, usually dry, occasioning pain and stitches in the breast, sides, and head; slight rigors, and some degree of feverish heat, with pain in the back, joints, and limbs, are the common effects of taking cold. This has been by authors reckoned the first stage of the disease. The method of treating such complaints is well known. Keeping  
warm,

warm, taking diluting drinks, softening pectorals, gentle aperients, and losing some blood according to the urgency of the symptoms, together with abstinence, generally removes them in a few days. The learned Sydenham thought the latter injunction sufficient for the whole<sup>6</sup>. Indeed the frequency of these slight indispositions, and the facility of removing them, render people exceedingly careless; and as what may be done at any time, is generally neglected; so the remedies which probably might have succeeded in the beginning, are postponed and omitted till the complaint is too firmly fixed to be removed by their effects.

The symptoms increase: the cough becomes more violent, hard, dry, and incessant; restless nights; the pains in the thorax more lacinating and fixed; the

<sup>6</sup> “ Si Tussis nondum febrim, atque alià symptomata  
 “ quæ ut plurimum se adjungere solere diximus, ac-  
 “ cerserit, satis esse arbitraber, ægrum à carnibus et  
 “ liquoribus spirituosus quibuscunque arcere.”

Sydenham, Tuss. Epid. An. 1675.

difficulty

difficulty and quickness of breathing considerable; the expectoration little and frothy; the pulse quick, hard, and sometimes like a small chord; at others, full and laborious; the tongue white, and the back part tinged with yellow; the eyes dull, the countenance pale and sickly; the appetite impaired, the stomach sick, nauseating food, and sometimes rejecting it<sup>7</sup>. The patient still goes about; and as it is only a common cold that will easily go off, does not think it necessary to be under any restraint: perhaps by the advice of some female Sybil, takes a family

7 “ Tussi phthificæ sicuti ferè semper inappentia,  
 “ et sitis accedunt, ita etiàm post cibum vomitio ferè  
 “ supervenire solet; adeo uti æger à pastu continuò  
 “ ferè tussire soleat, donec cibus tandèm vomitione  
 “ fuerit rejectus.

“ Atque quidèm hæc vomendi dispositio cum tussi  
 “ conjuncta, mihi est inter certissima signa Pathogno-  
 “ mica tussis Phthificæ. Etsi enim aliquot laborantes  
 “ Phthisi (ubi scil. conjuncta febris admodùm mitis  
 “ fuerit) appetitu ferè integro uti noverim, vix tamen  
 “ ulli absque hac vomendi dispositione, unà cum tussi  
 “ conjunctâ, à sumpto cibo reperiébantur.”

Morton Phthisiologia p. 102. An. 1689.  
 nostrum,



nostrum, with plenty of strong broth and wine whey, to nourish and support his strength.

Should the patient chance to be a female, with all the spirits, warmth, and inexperience of youth about her; it is more than probable that after wrapping herself up in the morning, in what the fashionable world calls an undress, while in the house; she will in the evening, whatever may be the state of the weather, in this drizzling and variable climate, half naked (being then full dressed) alternately expose herself to the chilling damps of the cold, moist, night air, and the heated atmosphere of a drawing room, loaded with the various exhalations and effluvia arising from a crowded assembly. And this she will do as long as her strength and spirits can support her to tread the nightly round of dissipation. Need we then be surprised at the rapid and unexpected progress which the disease makes in such cases, and in such circumstances!

I have

I have always thought it a matter of great importance, and considerable difficulty, to determine when complaints of the breast may with propriety be termed a consumption. And though I cannot pretend to do this with that exactness with which other diseases are defined; yet it is necessary to attempt at least the outline.

A Cough, with pain in the breast, difficulty of breathing and feverish heat, though it may become, cannot be termed the first stage of the disease; because we know these symptoms may be easily removed. The frequent application of the term consumption to such complaints has been the cause of much evil to those really affected with the disease; for by trusting to remedies, that have in such cases been found effectual, they have been past recovery, before they apprehended themselves in danger.

The symptoms I have enumerated may properly be said to tend to a consumption if not speedily removed; and as the dry  
sonorous

sonorous cough preventing sleep, if attended with dyspnœa and wasting of the flesh indicate the existence of tubercles, however small, it may be termed the inflammatory or *first period*.

In a short time the fever becomes more intense, with accessions in the afternoon or evening, and a slight perspiration breaks out in the morning upon the breast and upper parts of the body, to the sensible relief of every symptom. A remission succeeds and continues during the forenoon. The cough does not abate, and is aggravated in a recumbent posture, preventing sleep till towards morning, when the sweat comes on. The expectoration increases in quantity, is frothy, and sometimes streaked with blood. During the fever the cheeks appear as if painted with a circumscribed spot of pure florid red; the lips and tubercles in the canthus of the eyes, are also redder than when in health. The feverish heat is augmented after eating, particularly solids, and on taking exercise, with flushing  
ing

ing in the face, and a burning dry heat in the palms of the hands, and soles of the feet. The augmentation of the fever upon eating does not appear to proceed from the admission of new chyle to the blood, as is generally supposed, because it comes on immediately after, or even during the taking food, before the digestive process has begun. When taken in the morning during the remission, no increase of fever is perceived. It seems to arise from the stimulus of the aliment upon the stomach, occasioning a greater degree of tone in the muscular fibre.

As the disease advances, the fever becomes more stationary, and the remissions more distinct; the accession is about the middle of the day, increases till evening, and continues violent most part of the night, till the morning sweat breaks out, and the patient gets some rest. Authors have said there is a second exacerbation in the evening<sup>8</sup>, but

<sup>8</sup> Cullen first lines. § 858. Ed. 4. An. 1783.



this I have not observed as a general symptom. In the morning they find themselves relieved, but get up pale, languid, and unrefreshed by their sleep.

Though the pulse is always quicker than its natural state, yet there is an evident remission of the fever, and an abatement of the symptoms for some hours in the forenoon. The expectoration becomes more copious, and in the morning is mixed with pus in small globular masses; sometimes disagreeable to the taste; yellow, greenish, and as the disease advances, of an ash colour.

As the matter expectorated grows more fluid, the cough abates of its violence, but not in its frequency; and the lungs being less agitated, the pains in the breast and head are relieved, or rather they are less; which feeds that delusive hope, by which the patient is supported through every stage of this distressing disease; never relinquishing the expectation and even certainty of a cure, and always conceiving they are much better.

better. They are particularly ingenious in accounting for every accession of fever, or increase of any other symptom; and as readily attribute their remission to the effects of some remedy which they may have taken by the advice of their physician, or their friends : for in this disease, it is not the least of the dangers attending it, that every one who approaches the sick, knows a certain and efficacious remedy, which the fears and apprehensions of the patient induces them too often to take. For I believe it is a principle in the human mind, not confined to the ignorant and uninformed, rather to use means that are incomprehensible, than trust to those which give a reasonable expectation of success.

At this period, when the hectic fever has regular remissions, when the sweats come on every morning, and when the patient spits up matter freely, even though it should be in small quantity, I am disposed to think the disease

ease

ease a confirmed Phthisis Pulmonalis.

The countenance now gives evident signs of wasting; the fat that used to fill up the sockets, and support the eyes, assisting their lustre and brilliancy, melting away, they sink, grow dull and languid; the cheeks appear prominent, the nose sharp, the temples depressed; the flesh wears away from every part of the body, and the strength rapidly diminishes; the cough is more distressing in the first part of the night; the breathing is short, quick, and of an offensive smell; the sleep less, and disturbed; the morning sweats profuse and melting; the degree of heat augmented, and the remissions shorter and less perfect. The spitting appears more loaded with matter, brought up easier, and in greater quantity, sometimes a pint in twenty-four hours. This I esteem the second period of the disease; while there still remains some degree of strength, and the digestive faculties are so far unimpaired, as to be

C capable

capable of assimilating nourishment to support the body.

From the beginning, the appetite is less injured than could be expected, considering the quantity of disease. The body is for the most part costive, particularly after the morning sweats have taken place. The urine is generally high coloured and deposits a sediment of red or whitish matter. About this time in females, their monthly evacuations cease; and this becomes another ground of hope, as it is to their imagination, a reasonable cause for all their complaints; nor is it possible to convince them, were we disposed to be so cruel, that it is merely a necessary consequence of the diminished strength of the moving fibre, and the general weakness of the system.

The third and last act of this domestic tragedy, commences by the appearance of a purging. Though this very generally takes place towards the end of the disease, when it terminates fatally, yet sometimes there is scarcely any appearance



pearance of it. I have lately attended a case of this kind, in which the bowels were very little affected, not more than one loose motion in a day. From having been generally costive during the former periods of the disease, the patient has now frequent motions in a day, which soon becomes a confirmed diarrhoea; every thing taken into the stomach, quickly running off by the bowels. When this circumstance takes place, the fever heat, and morning sweats abate of their violence, but the cough continues distressing at night, preventing sleep, which can only be procured by an opiat. The tongue appears clean, and with the faucis is of a bright red; sometimes covered with aphthæ, and generally sore and tender. The voice grows very hoarse; the speech interrupted by shortness of breath and hiccough; both which are extremely troublesome. Their lower extremities swell and retain the impression of the finger.

It is not a little surprising, that in this stage of the disease, and sometimes sooner, the appetite should be unnaturally keen, and that the patient should devour a very considerable quantity of food. This symptom, which I have frequently met with, is mentioned by Hippocrates<sup>9</sup>, but not taken notice of by authors in general. As increase of appetite is generally a mark of returning health, this symptom deserves particular attention, as it may lead the unwary practitioner into a falacious prognostic.

The deluded patient still expects a favorable event, and really suffers less than the afflicted parents, who sit, watching a favorite, perhaps an only child, and see them wasting away before their eyes,

“ *Quanto verò magis tempus progreditur, tantò magis pus sincerum spuit, et febres acutiores fiunt, et tussis frequens ac fortis, et inedia vexat, et tandem alvus infernè turbatur.*” Hippocr. de Morbis. lib. 1.

“ *Phthifici cibum avidè appetentes et exinde robur neutiquam acquirentes, desperati: Nectar enim vitale deprædationi dicatum indicat.*”

Chr. Benedicto—Tabid. Theat. p. 111. An. 1656.

by

by an incurable disease; and full of hope, unconscious of danger, rapidly rushing to the grave.

The Diarrhœa becomes more violent, the heat and morning sweats abate, the spitting is diminished, especially in the day-time. Their strength fails them to such a degree, that they can scarcely bear the least motion without fainting. Their mind participates in the decay of the body in a remarkable manner; their memory fails them so much, that after a restless night, they cannot recollect what passed the preceding day, perhaps, not what they did a few hours before. Even their affections, the dearest sensations of the soul, forsake them. This to the patient is a happy circumstance, but to an attentive observer, the cause of deep concern, inasmuch as it seems to indicate the soul or sentient principle, to depend upon the strength of the muscles, and conformation of the body<sup>10</sup>.

As

<sup>10</sup> This weakness of the mind, may be observed in all

As they approach the fatal period, they have frequent and long faintings; their nails seem bent round the extremities of their fingers; the hiccough is distressing; sometimes slight convulsions;

all diseases occasioning a debility in the moving fibre, such as those termed putrid, the scurvy, dysentery, &c. But it is particularly obvious in old people who have enjoyed general good health. They grow unwell, without any particular disease, peevish and discontented with every thing about them; restless and moving from place to place. In a short time they become calm, easy, placid, and equally indifferent to their own condition, as to that of every one connected with them. Their natural affections seem to be obliterated, and they slide into the grave with more than stoic apathy, without a consciousness of pain or anxiety. Is then that power, that vivid principle within us, that active agent termed mind, which soars even to the skies, and thinks this globe too confined for the sphere of its excursions, a mere modification of certain fibres and canals! and does it depend for its existence upon materials so frail and perishable! Is it not rather according to the orthodox theologian, an emanation from the great Creator of the universe, pre-existing, and that shall exist to all eternity! This enquiry, curious, awful and interesting, is incapable of elucidation from powers so limited, so confined as ours.

their



their voice falters; and at length death steps in, and gently puts an end to hope and suffering at the same time.

It must not be expected, that the symptoms keep the regular order in which they are placed here; on the contrary, they vary in almost every patient. In treating the subject at large, the principal and leading traits of the disease can only be given; to have entered into minute particulars, would only serve to swell the work, without instructing the reader. In some cases the disease makes a rapid progress, and hence is termed a galloping consumption. In others, and that the greater number, it is much slower. The duration is in proportion to the youth and strength of the sick, season of the year, and many other considerations, from six months to two years. In some cases the fever and other symptoms, are much more violent than in others, depending upon the habit of body, and tone of the muscular fibre; and therefore in males the symptoms run higher than

than in the other sex; and in the latter, the disease usually makes a greater progress before it is discovered, frequently beyond the possibility of assistance. Of this I have met with many melancholy instances, and not a few of them at boarding schools; where the governess, from a well-meant caution of not alarming the parents, and considering the complaint as a common cold: neither acquainted them nor called assistance till the disease was confirmed. Let me therefore caution parents, and all who have the care of young people, not to neglect coughs and affections of the breast, nor while such complaints remain ever to consider them in safety; lest by thinking them of no importance, and powering down greasy emulsions, and a profusion of palling sweets, they sacrifice that time, which might be employed in pursuing a judicious plan of cure, and sow the seeds of lasting affliction in their own minds.

C H A P.

C H A P. II.

*Common cause of Phthisis—effects of cold and moisture—change that takes place in the exhalent vessels—lymph convertible into pus—what has been termed bronchial polypii—not a glandular disease—extravasated blood does not become pus—obstructed glands not the origin of Tubercles—how formed—to distinguish pus from mucus—production of pus.*

THE task would be difficult, perhaps impracticable, to account satisfactorily for every symptom attending consumption of the lungs. Like many other diseases, its violence and progress depends upon circumstances, which from our limited knowledge in the laws and operations of the animal œconomy, we cannot perceive; and on others with which we are frequently not made acquainted. Violent exercise, intemperance in eating, drinking, gratification and passions of the mind; sudden stopping of accustomed evacuations,

evacuations, by cold externally applied, or drinking cold liquors when heated; and the effects of cold and moisture, are among the most common causes of Phthisis.

The manner in which disease originates in the human body, is involved in great uncertainty; and, notwithstanding the labours of many learned and ingenious Physiologists, there are but few instances where we can clearly, and demonstrably explain, how the alteration takes place from health to sickness, from perfect ease to exquisite pain. The subject now under consideration, although the most common cause of complaint, particularly in our changeable climate, remains still in obscurity. Perhaps from its frequency, becoming familiar to the mind, both of the patient and the physician, and both being satisfied with the cause usually assigned, it has not been thought necessary to enquire, whether that cause was, or was not consonant to the laws of our system. I have not the presumption to suppose, it is in my power to throw any  
new



new light upon this matter; but as it has become part of my duty to bestow some thought upon it, the reader has a right to the result, and which I offer rather as conjecture than just reasoning.

Cold, in a moderate degree, may be applied to the body without producing disease. A person immediately out of a warm bed, plunges into the cold bath, where the pores receive a greater check, than they can do in any other situation, with impunity. But when cold is applied in a violent degree, it occasions torpor, mortification, and death. In some instances it has acted as a sedative in such a degree, that it was with difficulty the person could be kept awake, and in motion, till they reached a place of shelter.

Cold, united with moisture, when applied to the external surface of the body, or by respiration to the internal surface of the lungs, produces various complaints. These effects have usually been accounted for, by the stoppage of sensible, or insensible perspiration thereby occasioned.

ed<sup>1</sup>. The symptoms which succeed, are pains in the limbs, joints, head, and back, soreness in the throat, with slight shivering and flushing heat. If these symptoms were occasioned by the retention of so much perspirable matter, as would have been discharged from the habit during the time of their continuance; it is reasonable to suppose, that by opening the pores, and by perspiring freely, the effects would cease. This every day's experience evinces is not a fact. The fever and pains frequently increase, and continue some time, notwithstanding the patient shall lye, as it were, in a bath of perspiration; till by evacuations, diluents, and antiphlogistic remedies, they are re-

1 “ Animadvertendum est, effluvia ista, quæ a sanguinis massâ per insensilem transpirationem obligari solent, à frigore cutis speracula subito contrahente intrò verti, et in Pulmones deponi, quos irritando Tussim mox excitant.”

Sydenham. Tuss. Epid. p. 207.

Keil on Animal Secretion, p. 272, found upon getting cold and a cough, that his perspiration was not diminished. An. 1738.

moved.

moved. We also know that by the wonderful conformation of our frame, when one secretion is diminished, another is proportionably increased. In a cold frosty morning we perspire less, but the renal discharge is augmented. A stream of cold air from an aperture in a door or window, will occasion a fixed pain in a particular muscular part, without affecting the general habit; as a stiff neck, or pain in the shoulders. I have seen the glands in one side of the throat swelled and inflamed by a momentary blast of cold air, without any other symptom succeeding. To suppose a local check to perspiration, will not sufficiently explain these effects.

Perhaps the exhalent vessels, that secrete the fluid, serving to moisten the interstices of the muscles, and muscular fibres, may be so affected by cold partially and suddenly applied, as, instead of a clear transparent lymph, to secrete a fluid so viscid, as not readily to be absorbed by the lymphatic system; and by its remaining some time, occasions that stiffness and  
foreness



forenefs in the parts, which is constantly felt. This theory feems to acquire fome degree of fupport from the means that are efficaciously ufed in removing fuch complaints, being the moft proper to thin fuch fluid, and make it fit for abforption, namely, the warm bath, fomentations, and moderate warmth applied in any way <sup>2</sup>.

I muft

<sup>2</sup> This idea of the exhaling veffels being fo acted upon by difeafe, as to excrete a fluid infinitely more viscid and thick than they do in an healthy ftate, feems to receive fome fupport from the fenfation termed thirft. When we have eaten falted or high feafoned food, ufed violent exercife, or been expofed to great heat, either externally or internally; the faliva and lymph fecreted in the mouth and fauces, is not only leffened in quantity but alfo greatly thickened; and inftead of a clear, transparent fluid, becomes viscid and gleuy, fo that in the language of the facetious knight, we may be faid to “spit fixpences.” Were this effect to take place only when we have been expofed to heat or fatigue, we might fuppofe it arofe from the diffipation of the moifture by perfpiration, but it happens moft frequently from diet, even when we drink more than common, and continues fome time. Does not this proceed from the ftomach being acted upon, and thence communicated

I must own, I am not perfectly satisfied with this, or any other theory that has occurred to my mind upon the subject, but least of all with that commonly received; nor am I disposed to enter more fully into the question; a disquisition of that nature, however connected, not being essentially necessary to the prosecution of my design.

Into every cavity of the body, a great number of exhaling vessels open: they secrete a fluid which preserves the parts moist and smooth; and by lubricating the surfaces of the different viscera, enables them to move on each other without friction or injury. In the lungs the exhalent vessels serve a noble purpose; they become excretories, and secrete a large quantity of lymph, which is dissolved and carried off by the air in respiration.

communicated up the oesophagus to the mouth, and there constringing the excretory ducts of the salivary glands, and the mouths of the exhalent vessels? Some passions of the mind will suddenly produce the same effect.

“ The

“ The apertures of these vessels, from  
“ any cause exciting inflammation, may  
“ be so altered, as to excrete a vis-  
“ ced matter somewhat similar to the  
“ fizy crust on blood; with which the  
“ cavities of the body and even the in-  
“ side and outside of the heart, have  
“ been found lined; and this fluid must  
“ have the property of coagulating im-  
“ mediately after being secreted otherwise  
“ in the heart, the flux of blood must  
“ have washed it off. It is highly pro-  
“ bable also, that from disease, these  
“ vessels have the power of changing  
“ their lymph into pus; as large quan-  
“ tities have been found in cavities of  
“ the body, without any appearance of  
“ ulceration or <sup>pus</sup>bleefs, from whence it  
“ would have proceeded <sup>3</sup>.” The exhal-  
ing vessels in the lungs, opening in the  
air vesicles, having their apertures so  
altered, as to produce this viscid lymph,  
a less quantity will be secreted; and if

<sup>3</sup> See Hewson on the lymphatics.

from the effects of cold and moisture, the insensible perspiration on the surface of the body should be obstructed, and a larger quantity thrown upon the lungs, they will be loaded and oppressed; their parynchematous substance will become more dense and inelastic; the diameters of the various branches of the pulmonary artery and vein, will be diminished by its pressure; and consequently the circulation of the blood through this organ will be impeded.

When the lungs are in this state, the patient will breathe quick and with difficulty; they will feel pain and weight in different parts of the chest, and a general foreness and sense of fullness upon a deep inspiration. The ramifications of the bronchia will be lined with this viscid lymph, which by irritating their sensible membranes, will occasion frequent coughing and inflammation. The cough, indeed, in these cases is truly alarming; for it continues incessant till the offending matter is discharged; and there have been

D

many

many instances of this matter being so viscid and compact as to retain the form of the cavities into which it had been secreted, and till its nature was investigated, acquired the name of bronchial polypii<sup>4</sup>.

On a recent cold, we perceive the matter is expectorated with difficulty, little in quantity, white, viscid, and tasteless. In a short time, as the inflammation and other symptoms abate, it changes to a yellow colour, disagreeable taste, and is discharged with ease in greater quantity. This phlegm is so like pus, that it is not to be distinguished without a narrow inspection, and examining it in the manner that will be hereafter explained. And the numerous cures of confirmed con-

<sup>4</sup> The eminent Dr. Warren has published a curious case of this kind in the Med. Transf. Vol. I. An. 1772.

See also Philos. Transf. Ab. Vol. 3. p. 68.

The liquor in the Pericardium has been found jellied to such a degree, as to bear cutting with a knife.

M. du Martell. Ab. Phil. Transf. Vol. 3. p. 69.

Other instances may be seen in Morgagni Sed. et caus.

Morb. lib. 2. Epist. 21. Art. 20.

fumptions



sumptions that we sometimes hear of, probably owe their credit to the mistaking the one for the other; for was the disease really and bona fide so frequently and so easily cured, this work would have been perfectly unnecessary.

Is it not probable, that such a state of the exhalent vessels takes place in the whooping cough; where the fits are violent, and continued till a viscid glary phlegm is discharged? This idea receives strength by the relief that is experienced by frequent vomiting, in discharging the matter easily, and by change of air; for as there is apparently a considerable degree of spasmodic affection, or such a disposition of the nerves, as render the lungs extremely susceptible of irritation; inspiring a purer, a more dephlogisticated atmosphere, will prove the most successful application. I shall subjoin a very singular instance of this kind <sup>5</sup>.

If

<sup>5</sup> A gentleman subject to frequent attacks of a spasmodic asthma, was seized with it violently in the summer



If disease produce such a change in the apertures of the exhaling vessels, and visciduity in the lymph; the same cause continuing to act, may probably increase that viscid quality, till it shuts up their extremities, and constitutes the small granules, every where found in diseased

of 1783, when in the neighbourhood of Park Place \* near Henley, Oxfordshire. His breathing was extremely laborious, and it was with much difficulty he walked a few paces, supported by a friend, in the gardens to the mouth of a subterraneous passage, which he entered. He had not advanced many yards, when to his great surprise he found himself perfectly well, and the oppression entirely removed from his breath: although before he entered, he could not walk three steps without stopping to breathe, he now actually ran the whole length of the passage, without the smallest difficulty or inconvenience. When he came into the common air, his difficulty of breathing returned, and continued the usual period. He experienced similar relief, in a less degree, in a kind of cave cut out of a chalk hill at Ingerest in Kent.

\* The passage is cut through a hill consisting entirely of chalk and flints, is 170 yards long, 7 feet high, and 5 feet wide. Thickness of the hill above the center 22 yards; direction near N. and S. the N. end elevated. I examined it in December, when the thermometer in the open air was 38; in the center of the passage 43.

lungs,

lungs, termed tubercles. Almost every author who has written upon the pulmonary consumption, has supposed tubercles to originate from diseased lymphatic glands in the substance of the lungs<sup>6</sup>; and that a regular process of swelling, inflammation, suppuration, and rupture took place in them similar to a phlegmon, or bubo, on the external parts of the body. This being taken for granted, they have termed a consumption a glandular disease, and consequently that, as most glandular af-

<sup>6</sup> “ Phthisis pulmonalis, oritur obstructio sæpissime in  
 “ glandulis per pulmonis substantiam diffeminatis, vel  
 “ arteriis bronchialibus : aliquando etiam in minutissimis  
 “ arteriæ pulmonalis vasculis.”

Home Princip. Med. p. 134. An. 1762.

“ Une lymphe trop dense qui a dégénéré de son carac-  
 “ tère, engorge *les glandes & les points glanduleux* qui sont  
 “ très-multipliés dans les poumons ; il en résulte *des*  
 “ *abcès, des tubercules* qui s’enflamment successivement,  
 “ forment des ulcères dont le *pus resorbé en partie dans la*  
 “ *masse* des liquides la met dans le désordre, la pervertit  
 “ & produit un marasme général qui bientôt debilité  
 “ toutes les fonctions & les éteint.”

Traité de Phthisie Pulmonaire par Mr. Raulin, M. D.  
 Paris 1782. 8vo.

fection,

fection, were, or might become more or less scrophulous; they suppose that all pulmonary consumptions were of that kind, or nearly so. Thus a superstructure is built upon a foundation taken for granted, but never proved; which being removed, the other falls to the ground of course. That people with a scrophulous habit of body, or with their glands swelled and indurated, may have at the same time a pulmonary consumption, does no more prove the disease to be scrophulous, than it would be proved cancerous, should the patient be afflicted with that dreadful malady. Whoever will examine the lungs when diseased with tubercles, not suppurated, will find them sown so thick, that were they glands, the whole substance would be of that nature, which we are convinced it is not, by examining the organ in a sound state. The existence of lymphatic glands in the substance of the lungs has never yet been proved, nor even attempted; it is one of those general assertions we so frequently meet in Medical authors, misleading

misleading the student, and deceiving the practitioner. From my own enquiries into this matter, I am disposed to think there are none; and the more so, as I am supported in the opinion by a late eminent and ingenious anatomist<sup>7</sup>. In all nature's operations, we find a striking simplicity and conformity. If there were lymphatic glands, there would be lymphatic vessels, visible by their magnitude and number, running from one to the other, and entering their substance, as they do in every other part of the body; but in the substance of the lungs no lymphatics are found, and for the best of all possible reasons, that there is no use for them; the air in respiration performing the office of absorbents. To doubt, therefore, is not less necessary in medicine, than in other branches of philosophy.

When hæmoptysis, or spitting blood from the lungs has terminated in Phthisis, it has generally been supposed that the ex-

<sup>7</sup> Hewson on the lymphatics.

travaſated blood remaining in the lungs, did ſuppurate, or putrify, and became pus or corruption; but this poſition is not founded in fact. In ſuch caſes blood has been found in large maſſes, without the ſmalleſt appearance of ſuppuration <sup>8</sup>.

That ulceration in the lungs originates from the red particles of the blood obſtructing and filling up the ſmaller veſſels forming what is called an error loci, and by inflammation and ſuppuration becoming pus,

<sup>8</sup> On examining the body of a man who died of an Hæmoptoe after three weeks illneſs. “ In the lungs of  
 “ both ſides of his cheſt were large grumes chiefly to-  
 “ ward the back, an univerſal echymoſis was viſible  
 “ through the membrane, and above a pound extravafate  
 “ in the cavities; it is obſervable, that no part of  
 “ the blood extravafated here had the appearance of cor-  
 “ ruption.”

“ But from the appearance of the lungs in this  
 “ ſubject, wherein was a total confuſion of  
 “ fibres and cruor, the hæmoptoe was rather  
 “ conſequential of a diſſolution of the fibres,  
 “ which let the blood extravafate as well  
 “ into the interſtices of the veſſels as into the  
 “ cheſt and bronchiæ.”

Cloſſy Obſ. p. 56. Anno 1763.

I believe



I believe is very generally given up. For wherever red blood is extravasated either into the cellular membrane, or cavities of the body, if it has not access to the common atmosphere, does not become pus, or even putrify. The induration in the limbs of scorbutic patients from extravasation, and the echymosis formed by some species of aneurisms, are proofs of this, among many others that might be mentioned<sup>9</sup>.

From the foregoing considerations, I hope it will appear reasonable to suppose, that tubercles originate from the extremities of the exhalent vessels being obstructed by the viscidities of their contents; and this opinion will appear still more probable from the following minute description of them; the truth and accuracy of which

<sup>9</sup> “ That pure blood shed from its vessels, by means  
 “ of external violence, and kept from the air, will not  
 “ turn to, or become matter, is, I think, proved incon-  
 “ testibly by every day’s experience, in many instances,  
 “ in aneurisms by puncture, in retained menses by im-  
 “ perforate Vaginæ, and in all echymosis.”

Pott’s Works, 40. Ed. p. 24. An. 1775.

I have



I have many times experienced in the examination of diseased lungs.

“ Tubercles are found, on dissection of  
“ those who have died of this disease, of  
“ all sizes; from the smallest granules, to  
“ the bigness of a horse-bean, and com-  
“ monly in clusters. On cutting into them  
“ they appear of a white smooth cartila-  
“ ginous substance. In the smallest, no  
“ cavity or opening appears; in those far-  
“ ther advanced on the cut surface we  
“ discover small pin holes; in those still  
“ larger are one or more cavities contain-  
“ ing a fluid like pus; which being cleared  
“ off, in the bottom is perceived several  
“ small openings or holes; through which  
“ on pressing the tubercle, matter issued,  
“ similar to that contained in its cavity.  
“ The larger tubercles, when emptied of  
“ their contents, appear like a small cap-  
“ sula, into which entered a branch of  
“ the aspera arteria.

“ When the tubercles increase they are  
“ termed vomicae. These are also of vari-  
“ ous sizes, from half an inch to two or  
“ three

“ three inches diameter; and are usually  
 “ of an ovi form. When found entire,  
 “ their contents are white, yellow, ash  
 “ coloured, greenish, and sometimes  
 “ foetid matter; and when ruptured,  
 “ more or less redish. Several branches  
 “ of the aspera arteria are found opening  
 “ into these vomicæ; and they also com-  
 “ municate with others that lye conti-  
 “ guous: the apertures of the latter, are  
 “ ragged and irregular; of the former  
 “ round and smooth. The large vomicæ  
 “ are usually found empty, but on pres-  
 “ sing the lungs matter issues into the  
 “ bronchia. The branches of the pul-  
 “ monary artery and vein running upon  
 “ the vomicæ, are found much contracted  
 “ and sometimes filled up with a fibrous  
 “ substance; their pendulous ends hang-  
 “ ing loose in the cavities of the vomicæ,  
 “ completely shut up and covered with a  
 “ thick slough. By this wise dispensation,  
 “ we see the reason, why hæmoptoe does  
 “ not more frequently happen, when so  
 “ great a part of the substance of the lungs  
 “ is

“ is destroyed. And also, when it does take  
“ place, in what manner the mouths of  
“ the bleeding vessels are shut up again.

“ The parts of the lungs contiguous to  
“ the vomicæ are found inflamed, more or  
“ less solid, and impervious to air blown  
“ into the trachea; for when the other  
“ parts are thus distended, they remain  
“ depressed; nor is air admitted into the  
“ vomicæ, or at least in very small quan-  
“ tity.

“ When the lungs are partially affected,  
“ the upper and posterior parts are always  
“ diseased, and the sound portion is the  
“ inferior and anterior. When the affec-  
“ tion is general, the superior is the worst;  
“ and the left-side is generally found  
“ more diseased than the right.

“ Wherever tubercles or vomicæ are  
“ found, they firmly adhere to the parietes  
“ of the lungs near them; by which means  
“ a communication between their cavities  
“ and that of the thorax is entirely pre-  
“ vented <sup>10</sup>.”

We

<sup>10</sup> Dr. Stark's MS. Med. Commun. 1785.

When

We have observed, that the exhalent vessels being affected by disease in different degrees,

When I was preparing the first edition of this work for the press, not being well acquainted with book-making, I was at a loss how to distinguish an extract, or rather abstract (not being either *verbatim* or in the *arrangement* of the original) taken from a MS. not known, nor as I had been informed intended to be known to the public. On consulting with a medical friend, we agreed that the name at the bottom of the page would fully point out whence it was taken. But though it did so in general, and was noticed as such by the author of the Med. Journal for Dec. 1783 \*, yet in strict propriety it should have been marked with comma's as it now is. *Thirteen* years had elapsed from my first seeing the MSS. and in that time I had more than once heard it mentioned by the present editor, that as some part of the MSS. had been lost, he understood the remainder was not to be published; it did not therefore occur to me as necessary to consult any person on the subject. Had I given a description of Tubercles from my own notes of dissections, it would have so nearly resembled this in the leading points, that I thought it more candid to make the extract. But the nature of my work<sup>1</sup> required that what related to the subject

\* “ Dr. R. presents us with some interesting observations  
“ on the formation and progress of Tubercles, for which he  
“ acknowledges himself indebted to the MSS. of the late  
“ Dr. Stark.”

Med. Journal for Dec. 1782.

degrees, are capable of changing their contents, from a pure watery lymph to a fluid so viscid, as to coagulate immediately on being secreted; and also to convert that lymph into pus of various qualities: for pus in its natural state, secluded from the air, is smooth, bland, inodorous, composed of globules resembling those of milk; but according to the kind of inflammation, and being exposed to the air,

ject should be compressed, the language corrected, and some difference made in the arrangement †; though the sense will be found, (in my opinion) carefully preserved, and nothing material omitted. In so doing have I injured the memory of Dr. Stark? On the contrary, it has been the cause of publishing part of his MSS. after lying *Fifteen* years in the editor's hands, and but for this would probably never have seen the light; and consequently his work would have been deprived of that reputation it so justly merits.

This plain recital of facts is meant as an answer to what Dr. Car. Smyth has said upon the subject in his introduction to Dr. Stark's MSS. in the *Med. Commun.* and I must rely upon the candour of the reader to believe, that if I have erred, it was not intentionally.

† In the part now published, the editor has corrected the language, and in some measure altered the arrangement.

may



may become fœtid, thin, and sanious, as we find it in phagedenic and cancerous ulcers. If then tubercles are formed by obstruction in these vessels, by the viscid state of the lymph; and if pus is produced by secretion, and not by fermentation, as has been supposed; it seems probable, that the small pin-holes perceived in the substance of the tubercles, are the apertures of the exhalent vessels; and that the pus found in them, and issuing out upon pressure, is the lymph changed into that fluid. “ And if pus in these cases is produced merely by secretion, so likewise it “ would seem probable, that even in abscesses, where there is a loss of substance, “ it is not the melting down of the solids, “ that gives rise to the pus, but the pus “ being secreted into the cellular membrane, from its pressure, and from other “ causes, deadens the solids, and then dissolves them, which is confirmed by observing, that even a piece of flesh meat, “ if put into an ulcer and covered up, is “ soon destroyed and melted down by the  
“ pus,

“pus, which is thereby rendered more  
“foetid <sup>11</sup>.”

In this manner we can reasonably account for the substance of the tubercles being consumed by the pus that issues into them; and by the continual secretion, their size is increased till they burst into the ramifications of the bronchiæ. By their enlargement the parynchomatous substance of the lungs will be compressed, hardened, and afterwards melted into pus.

As the most certain prognostic in this disease, is formed from the quantity and quality of the matter expectorated; it will be necessary to consider with attention that part of our subject.

In the beginning, the matter spit up consists merely of the mucus lining the trachea, mixed with a considerable quantity of air, as appears by putting it in the receiver, and exhausting the air by the air-pump. As the disease advances, the

<sup>11</sup> Hewson on the Lymphatic System, chap. vii.

expecto-

expectoration gradually changes in quantity, colour, consistence, smell, and taste, and becomes a thick, viscid matter, of an ash colour, slightly tinged with green, sometimes with blood; discharged in small, round, spherical masses, resembling pus. It has been said, that matter spit up “from a glandular suppuration, or erosions of the lungs, has commonly a sweetish taste; and that from a cyst is foetid and disagreeable<sup>12</sup>.” As we have endeavoured to prove, that there are no lymphatic glands in the substance of the lungs, the first part of this criterion will vanish; and it seems probable, that the difference in the quality of the pus, depends upon the state of the inflammation, size of the vomicae, and the time it has been retained.

When pus or matter is mixed with water, and agitated in a basin with a whisk, it easily mixes, but on standing a few hours, a granulated matter precipi-

<sup>12</sup> Gilchrist on the use of sea voyages. p. 130. An. 1756.

tates to the bottom. Mucus is with more difficulty united with water, requiring longer agitation, but when uniformly mixed, it remains so, and after standing any given time, no precipitate will appear upon pouring off the ropery fluid<sup>13</sup>.

In making these trials some caution is necessary, that we be not deceived; and therefore it should not be trusted to the patient, or their attendants. Sometimes hard masses of phlegm, frequently of a greyish colour are spit up, which will sink in water, but when dissolved will float. Matter or pus, when mixed with much mucus or phlegm will float in water, being supported by the mucus, in which there

<sup>13</sup> Hippoc. Aretæus Cap. Celsus, &c. They used salt water.

Ch. Bennediſti Tabid. Theat. p. 104. An. 1656.

Van Swieten. Comm. Aph. Boerh.

Morgagni ſedibus & cauſis Morb. lib. 2. Ep. 22. Art. 28. An. 1762.

C. Darwin's Experiments.

Cullen's firſt lines of practice, vol. 2. § 856. Ed. 4. An. 1784.

Dr. Stark Med. Commun. An. 1785,

is much air, but when agitated will precipitate. It is necessary that the matter for the experiment should be part of what is spit up during the night or early in the morning. For when all the matter secreted in the night has been discharged in the morning, either by a vomit, or pumped up by incessant coughing, what is brought up during the day will be scarce any thing but white mucus, without any pus, or perhaps a very small portion now and then. I have seen the expectoration of a person in the last stage, during several hours in the middle of the day, without the least appearance of purulent matter. Had this been taken for the experiment, it is obvious what a fallacious conclusion must have been drawn from such premises.

This is a singular symptom, and not easily accounted for; it would seem, that rest was necessary for the secretion of pus, and that a certain degree of tension was removed from the vessels during night; or does the agitation of the mind, exercise or speaking, &c. in the day-time, prevent



its being secreted into the bronchiæ? An author of some reputation on this subject<sup>14</sup>, seems to have been deceived by the matter spit up in the day-time, and says, there is no danger when the spit in the day is white, whatever it might be in the night. Both to the physician and patient, it is of great moment that no deception takes place in this circumstance; but if matter or pus is spit up, be it by night or day, there can be no doubt but the disease is a confirmed Phthisis Pulmonalis.

There is no absolute criterion by which we can determine when tubercles are formed in the lungs: that is a desideratum which future observation may perhaps ascertain. When the cough is violent, continued with short intermissions, particularly at night, preventing sleep, with a hard clinking sound; and when a viscid

<sup>14</sup> “ Si interdiu sputa semper depurata projiciantur,  
 “ licet noctu malè colorata et constituta videantur, nil  
 “ desperandum: de die etenim sputa bene subacta et  
 “ alba sanitatem reducem pollicentur.”

Christ. Benedicti Tabid. Theat. p. 122. An. 1656.

phlegm is discharged, they are to be suspected. But when the cough is accompanied with rigors, succeeded by fever, and matter spit up, that precipitates in water, we have no difficulty in pronouncing tubercles completely formed, perhaps vomicæ, and therefore the disease is confirmed.

A late author, not more esteemed for his great and extensive learning, than for his mild and humane disposition, has said, "That as long as the appetite is good, and the sleep refreshing, I do not conceive the disorder can make any dangerous progress. I mention these circumstances, rather than the absence of fever, pain, or dyspnœa, because these symptoms, whenever they come on, do unavoidably affect either the sleep or the appetite<sup>15</sup>." When the complaint is in so early and simple a state, unfortunately, the physician's assistance is seldom required.

<sup>15</sup> Musgrave, Gullstonian Lectures, p. 99.

## C H A P. III.

*The hectic fever as described by authors—fever in early period of phthisis—pulmonary hectic—supposed to arise from absorption of matter, and termed putrid—examined and refuted—acrimony examined—hectic void of putridity.*

**B**EFORE I enter into a description of the hectic fever attending consumption of the lungs, it will be necessary to enquire what has been generally understood by that term, lest I fall into the error I have endeavoured to expose, that is, of using general and undefined terms, to which no precise and determined signification is associated.

It has appeared to me, that the elder authors, and some of the moderns of high reputation, have not confined the hectic fever to diseases of the breast, but describe it to be an habitual fever of the low kind arising from various causes. If

I can

I can make this evident to the reader's satisfaction, it will in some measure account for the fatal diversity in the methods of treating the disease, that is the subject of these sheets. Did medical terms like cognomens merely serve to distinguish one disease from another, it would not be of great importance, whether they were or were not justly applied ; but they have a greater influence in practice than is usually imagined. The prescription is sometimes adapted to the name, instead of the symptoms of the disease. In the fever attending Phthisis, this has fatally been exemplified, as will be made appear when we enquire how far it deserves the name of febris putrida.

That the ancients understood the hectic to be a continued fever, will appear from the works of eminent authors<sup>1</sup>. And  
one

<sup>1</sup> “ In febribus autem hecticis nunquam aliqua accessio conspicitur, sed perpetuò cernitur una febris continua, ut illa quæ synochos appellatur. Ea tamen quandam veluti flammam plurimam admoventi ma-  
num

one of them particularly distinguishes it

“ num possidet occurfantem : pulsusque ædit celerrimos,  
 “ frequentissimos, atque maximos. In hæcicis autem  
 “ febribus, neque multa occurrit caliditas, pulsusque tatò  
 “ minores, rariores, atque tardiores sunt iis, qui per sy-  
 “ nochos fiunt, quantò etiam caliditas ipsa est minor.  
 “ Commune itaque omnibus hæcicis febribus est, quòd  
 “ pusillæ, & semper à principio usque ad finem æquales  
 “ existant. Proprium autem est tabidarum, siccitas.  
 “ Nam sine siccitate sæpius hæcicæ febres consistunt,  
 “ quum minimè in tabem degenerant. Jam cæteras fe-  
 “ bres quæ incompressas accessiones fortiuntur, omnino  
 “ compressio aliqua committatur, dum cibus ingestus fue-  
 “ rit in accessionis principio. Hæcicis autem, post ci-  
 “ bum assumptum, quendam velut inconcussum insul-  
 “ tum fieri contingit, qui tamen non est accessio, sed  
 “ incrementum caloris, atque promotio pulsus in mag-  
 “ nitudinem atque velocitatem, qualis cuicunque alteri.  
 “ post cibum solet accidere.”

Galen. diff. feb. l. 1. cap. 9. Ed. A. Lacuna. An. 1643.

Ibidem. - - l. 2. cap. 9.

“ Quoties igitur vel ex lassitudine, vel ira, vel pluribus  
 “ curis, vel vigiliis, vel tristitia, vel longa inedia, vel uni-  
 “ versis unà coëuntibus, siccatum corpus est, ac febris  
 “ invasit, quæ et aridam reddit cutem, et igneum calo-  
 “ rem refert : utique hunc talem timor est hæctica febre  
 “ correptum iri, potissimum in æstate, ac coeli statu  
 “ sicco calidoque.”

Ibidem de methedo medendi. lib. x.

Ibidem de mārasmō. lib. i.

from



from continual and putrid fevers, by its want of increase and decrease<sup>2</sup>.

English authors of the last century<sup>3</sup>, describe the hectic fever in a similar manner. One of them goes farther, and says,  
 “ This

“ Quum immodicus fervor humiditati substantiali  
 “ quæ solidis particulis inest, supervenerit, non tamen  
 “ hæc dissipata fuerit, verum salva adhuc in eis perseveret,  
 “ semperque ferveat, et nullam declinationem habeat,  
 “ tunc hujus febris speciem *hecticam* nominant.”

“ Quod si febris intervallum prorsus nullum habeat,  
 “ adhæc neque obscurior aut vehementior fiat, sed eo-  
 “ dem modo firma ac constans, hecticam hanc esse pu-  
 “ tato. Nam in putridis et incrementum et imminutio  
 “ accidit : augmentum quidem in statu, imminutio au-  
 “ tem in declinationibus.”

“ Etsi vero continentis hac ratione similes hecticis vi-  
 “ deantur, quod et ipsæ nec augmentum nec imminutio-  
 “ nem recipiunt : attamen caloris qualitate et pulsibus  
 “ ab illis discernuntur ; siquidem continentium calor non  
 “ est siccus et acris, quemadmodum in hecticis, sed etiam  
 “ in summa cute magis apparet. Ac in continentibus  
 “ pulsus sane magni et celeres existunt, in hecticis au-  
 “ tem exigui et obscuri. Hoc sane modo hecticas ab  
 “ omnibus ex putridine ortis discernere poteris.”

Alex. Trallian. Ed. Alb. Haller. lib. xii. cap. 4. An. 1772.

<sup>3</sup> “ A hectic fever is constant, without accession or  
 “ paroxysms as other fevers ; save only that an hour or  
 “ two

“ This I may safely conclude, there is  
 “ many a pulmonic consumption, without  
 “ the evident signs of the hectic fever,  
 “ viz. a sharp equal heat over the whole  
 “ body, a glowing of the extremities an  
 “ hour or two after meat, a quick low  
 “ pulse, &c. without which I can attest,  
 “ I have found several consumptives,  
 “ though for what I knew, there might  
 “ very

“ two after meat the heat is greater, and the pulse quicker,  
 “ which is common to all that have this hectic fever.”

Maynwaringe on Consumption, p. 58. 2 Ed. An. 1668.

“ An hectic fever implies a two-fold sense: 1. It is  
 “ taken for any confirmed, fixed, and durable fever, ad-  
 “ mitting of no easy cure, or rather a fever that is grown  
 “ *habitual*, in opposition to a *schittical* fever, which being  
 “ but lately arrived, is easily expelled, as a diary or pu-  
 “ trid fever. 2. It is more generally understood for a  
 “ fever in the solid parts, into whose penetraills and essen-  
 “ tial principles insinuating, is there as it were planted  
 “ or rooted, and consequently proves the most stubborn  
 “ to cure of all other diseases.”

“ On the other hand, if we consider it as a *Merbus in*  
 “ *fieri*, then it must have its dependence upon purulent  
 “ steams dispersed from the heart, together with the blood  
 “ to the parts, where arriving, they cause a kind of heat  
 “ and glowing in the substantial principles, whereby they  
 “ are

“ very probably have been a latent hectic.  
 “ ---Hence you may extract what I in-  
 “ tend by an *hectic fever*, namely the in-  
 “ *nate heat* kindled into a destructive fire,  
 “ violently absorbing the oily *radical moi-*  
 “ *sture*, through the appulse of saline  
 “ steams, which through their contra-  
 “ riety to the balsamic mixture, excite a  
 “ fervent fermentation in this latter, like  
 “ oil of vitriol, poured upon oil of tartar,  
 “ or water on lime.” (a) This last is a  
 curious specimen of the physiology of  
 those times.

The

“ are set in fire, until the purulent acrimonious steams  
 “ are dissipated.”

Gideon Harvey Morbus Anglicus, p. 7. 2 Ed. An. 1674.

(a) Ibid. p. 69.

“ Atque primò de pulsu : incipiente tabe, dum nulla  
 “ febris præter hecticam adfuerit, præternaturalis calor  
 “ sicuti continuus est, et mitis ; ità etiàm pulsus, pro  
 “ gradu febris, aliquatenùs celerior est quàm par sit ;  
 “ ferè tamen semper eundem tenorem servat, nisi quòd  
 “ à cibo, ut calor febrilis, ità etiam, pulsûs celeritas fa-  
 “ ciliùs sentiatur. Et quidèm nonnulli Phthifici frigi-  
 “ diores, et phlegmatici, nullo alio tempore, vel pulsûs,  
 “ vel temperamenti errorem sentire solent.”

Ubi

The judicious Morton, who appears to have been better informed on this subject, than any of his cotemporaries that have come to my hands ; and whose theory and practice has been almost implicitly followed, and is even used at this time by many physicians of eminence ; considers the hectic as a continued fever, with no increase but after eating. This fever he describes as taking place before the putrid fever, which originates from the absorption of matter from the lungs. He even asserts, that persons in consumption, that

*Ubi verò, progressu morbi febris putrida intermettens, à pulmonum purulentiâ, supervenit, pulsus est admodum varius ; manè scilicet citra paroxysmum, aliquatenus celer, & debilis ; celer à dispositione sanguinis hecticè febrili ; debilis verò ab exhausto, et depauperato jam totius corporis habitu, præ reparationis defectu ex alimento debito sufficienti ministrandæ : in paroxysmo verò est celer et fortis ; celer à febre hecticâ, fortis à præsentis orgasmo, sive præternaturali sanguinis agitatione. Ingruente verò sudore, unâ cum celeritate præternaturali, etiam pulsus robor sensim minoratur, usq; dum vires à paroxysmo sequenti redintegrentur."*

Morton Phthisiologia. lib. 2. cap. 4. An. 1689.

are

are more cold and phlegmatic, do use to perceive nothing amiss either in their pulse or temper at any time but after eating.

A learned and eminent physician of our own time, has written expressly upon the hectic fever. He describes it as being similar to the genuine intermittent; that the “chillness is sometimes succeeded by  
“heat, and sometimes immediately by a  
“sweat, without any intermediate state  
“of heat; and the heat will sometimes  
“come on without any remarkable previous  
“chillness, and the chillness has  
“been observed to go off without being  
“followed either by heat or sweat. When  
“the sweat is over, the fever will sometimes  
“continue, and in the middle of  
“the fever the chillness will return,  
“which is a most certain mark of their  
“power. The hectic fever will return  
“with great exactness, like a quotidian,  
“or tertion, or quartan, for two or three  
“fits; but I do not remember ever to  
“have known it to keep the same period  
“for four fits together. The fit will now  
“and



“ and then keep off for ten or twelve  
“ days, and at other times, especially  
“ when the patient is very ill, it will re-  
“ turn so frequently in the same day,  
“ that the chillness of a new fit will fol-  
“ low immediately the sweat of a former.”

The learned author observes, it sometimes attacks suddenly, those in tolerable health, becomes violent, and in a little time brings them into imminent danger, and though the symptoms may abate, yet it never ceases till the death of the patient. But it generally advances slowly, of which the pulse always gives notice by its quickness, though it is not always to be trusted to.

“ For one in about twenty, patients with  
“ all the worst signs of decay, from some  
“ incurable disease which irresistably goes  
“ on to destroy his life, will shew not the  
“ least degree of quickness, nor any other  
“ irregularity of the pulse to the day of  
“ his death.” It will be brought on (he observes) whenever there is a great collection of matter formed in any part of the body, but particularly on inflammation of  
fchirrous

schirrous glands---Lying-in women generally die of this fever---women of the age of fifty and upwards are particularly liable to it---so are hard drinkers, “ but I never  
 “ yet remember any good by the bark in  
 “ this fever, unattended with an apparent  
 “ ulcer---At the same time I must acknowledge that I never saw any harm  
 “ from the bark, in these, or indeed in  
 “ any other cases, except a purging, or a  
 “ sickness of no consequence, where it has  
 “ happened to disagree with the stomach,  
 “ or where it has loaded it by being given  
 “ too fast, especially in dry boluses wrapped  
 “ up in wafer paper.---But besides the fatigue, and many inconveniencies, of a  
 “ journey to a dying person, the bath waters are particularly hurtful in this fever,  
 “ which they never fail to increase, and  
 “ thereby aggravate the sufferings, and  
 “ hasten the death of the patient<sup>4</sup>.”

The deserved celebrity of the learned and eminent author, will plead in my

<sup>4</sup> Heberden on Hætic Fever, Med. Transf. vol. 2. An. 1772.

excuse to the reader, for dwelling so long upon this performance. Not only as being the latest publication, in this country, expressly upon the hectic fever, but to shew the great disparity between the symptoms here enumerated, and those of the fever attending Phthisis Pulmonalis. The difference of the times of accession, the irregularity of the returns, the pulse not being at all affected in some patients, the different condition of those in whom it has appeared, and the bark being useful in it when attended with an apparent ulcer, are among the most prominent marks of its being a distinct disease from that we are about to describe.

I hope the authorities I have adduced, will evidently prove to the reader's entire satisfaction, that the term hectic when applied to the state of the patient, or to characterise a fever, does not always, and necessarily apply to the fever attending consumption of the lungs; but that it is intended by authors of great and deserved eminence, to signify fevers of very different

ferent origin and symptoms, and frequently of a continued kind 5.

I shall now proceed to describe the fever attending pulmonary consumptions, in such a manner, as to distinguish it from every other that has acquired the name of hectic. Its nature and origin we shall afterwards enquire into, particularly the

“ La fièvre lente ou hectique est une espece de fièvre  
 “ continue très-legère, peu marquée dans son com-  
 “ mencement, peu considérable même dans une partie  
 “ de son cours, mais dont les suites n’en sont pas moins  
 “ redoutables & presque toujours funestes.”

M. Fournier, sur la fièvre Hectique Dijon, 1781. 8vo.

“ La fièvre étique n’a point d’intermittence, ses symp-  
 “ tômes sont toujours les mêmes dans les intervalles des  
 “ exacerbations, au lieu que les symptômes des fièvres  
 “ intermittentes ne se manifestent que pendant la durée  
 “ des accès. Lorsque la fièvre étique est établie, elle  
 “ l’est *constamment* jusqu’à la convalescence au jusqu’au  
 “ dernier moment du malade. La cause de cette fièvre  
 “ étant toujours la même, elle doit en général produire  
 “ les mêmes effets.” “ C’est ainsi que le chyle con-  
 “ tracte une qualité purulente, par son mélange avec le  
 “ pus des ulceres, dont la masse du sang est imbue &  
 “ dont elle a déjà pris le caractère.”

M. Raulin de Phthis. Pulm. Paris, 1782. 8vo.

long and implicitly received doctrine of absorption, acrimony, and putrefaction.

In the very early period of the disease, the fever is continued, and if it appears to increase at night, it is more from fatigue, than any other cause; a sense of chillness, or rather an increased sensibility to cold is frequently felt, succeeded by flushing heat. But a shivering resembling that of intermitting fevers, I have never seen. As the disease advances, the fever has slight exacerbations about mid-day, and continues, with more or less violence, till morning, when about three or four o'clock, a gentle perspiration, rather than a sweat, breaks out on the breast and upper parts of the body, to the sensible relief of every symptom. During the forenoon the patient is almost entirely free from fever till about noon, when the accession takes place. In the first period of the disease, before there is any pus expectorated, and even when very little phlegm is brought up by the cough, which though frequent is not violent, the fever will



will be very moderate, but it will be regular, and keep the periods I have mentioned, nearly as exact as a quotidian ague. But the heat and thirst not being violent, and the patients not confining themselves to a sick regimen, is the reason that the particular character of the fever is overlooked. The patients themselves are insensible or inattentive to these regular returns of fever; but the attentive practitioner may depend upon finding them, and they seem to be the first certain proof of the lungs having sustained an injury, though not irreparable.

In the progress of the disease, the fever is greatly augmented, the morning sweats more profuse, and the remissions distinct, but their duration gradually lessened; though even then the pulse is always quicker than the natural state. I have often thought that in the advanced period of the disease, there was a fever always present in the habit, and another fever superadded to it, attacking regularly by fits; the first proceeding from the general

inflamed state of the lungs, and the other from a cause we shall attempt to explain in the sequel.

In the last stage, when the diarrhœa has taken place, we find the heat and sweats diminish, but the pulse remains small and quick, seldom under 120 or 130 strokes in a minute. This is not a bad criterion of the fatal tendency of the disease, notwithstanding the seeming abatement of the symptoms, the increase of appetite, and what is with difficulty resisted, the patient themselves being convinced they are better. The feelings of the sick in most other disorders, may be relied on with tolerable safety, but in this, they are fallacious, and not to be trusted.

In order that we may distinctly ascertain this fever from every other commonly denominated hectic, I shall hereafter distinguish it by the name of pulmonary hectic.

Authors, with few exceptions from the days of Morton to the present, have agreed  
in

in attributing this fever to the absorption of pus, or purulent matter into the circulation, from ulcers, or abscesses in the lungs, and hence have stiled it a putrid fever. This phrase, *putrid fever*, is very extensive in its signification, for all fevers affecting the vis vitæ have been so denominated.

The effect of putrefaction upon animal matter is to destroy that attraction of cohesion by which its particles are kept in union, and thereby resolve its component parts into their first principles, earth, water, salt, and oil. If this shall be allowed a just definition, it will be evident that putrefaction, generally taking place in the fluids of the human body, is absolutely incompatible with life.

That the terms putrid and putrefaction, according to the common acceptation of these words, can ever with propriety be applied to the circulating fluids, in any disease, much less in that under our present consideration, notwithstanding the  
high

high authorities<sup>6</sup> with which that opinion is supported, and the very general acceptation of the doctrine, I must with all deference deny. And I am certain, and have seen many melancholy examples, that this opinion being taken for granted, without enquiry into its validity, a mode of practice has been adopted, that so far from curing, has done much harm, and precipitated numbers into the last and fatal stage of Phthisis Pulmonalis. Of this I shall speak more particularly when treating of the method of cure.

A judicious and learned author observes, “ If putridity actually took place

6 “ And here I must observe, that, in all fevers of this  
 “ nature, (putrid pestilential) the blood is always found  
 “ too much broken and dissolved, and at length becomes  
 “ highly acrimonious, and as it were sanious and pu-  
 “ trid.”

Huxham on Fevers, p. 299. An. 1757.

“ That the juices are already inflamed or putrified,  
 “ acrimonious, or arsenic, and that the solids and intel-  
 “ lectual organs are spoiled, relaxed, or putrified.”

Cheyne Dis. body and mind. p. 211. An. 1742.

“ in

“ in the vital fluids, its effect would be,  
 “ to break down the texture of its parts,  
 “ as it does that of every other body; it  
 “ must render it incapable of coagula-  
 “ tion<sup>7</sup>.” In diseases that have in an  
 especial manner been deemed to arise from  
 a putrid source, it is very natural to ex-  
 pect this dissolved state of the blood to  
 have been apparent in a thousand in-  
 stances. An eminent physician<sup>8</sup>, bled  
 many patients in every stage of the sea  
 scurvy, and found their blood as firmly  
 coagulated, and as free from any appear-  
 ance of putridity as the blood of persons  
 in a pleurisy. The celebrated Sydenham  
 bled patients many times in the plague,  
 and he found the blood highly inflamma-  
 tory. In the best account that I have  
 seen published, of the plague that lately  
 raged in Turkey and the Russian Crimea,  
 there is not the least mention of dissolu-  
 tion in the fluids<sup>9</sup>. When we examine the

<sup>7</sup> Millman on putrid diseases. An. 1782.

<sup>8</sup> Lind on the scurvy. An. 1757. Ed. 2.

<sup>9</sup> Duncan's Med. Com. for 1782 & 1783.

blood



blood drawn from patients in every period of consumption, so far from any appearance of dissolution in its contents, the reverse is constantly found; a thick, buffy size and firm erassamentum. Nay, so inconsistent are the favourers of this doctrine, that the size and degree of cohesion in the blood, has always been esteemed an indication that the operation ought to be repeated, and much blood has been unnecessarily shed accordingly. Nor in its progress do we perceive any symptoms similar to those found in diseases usually termed putrid: no petechiæ, vibicis, fordes about the teeth, or blood issuing from the gums and other parts of the body. Not that I esteem these as proofs of putrescency in the fluids; but their presence would have justified the application of the term to phthisis. If the reader wishes to see this subject treated at large, he may peruse the excellent work quoted before, p. 71. No. 7.

Another general cause, twin brother to the former, from whence this fever, and many others have been supposed to originate,

nate <sup>10</sup>, is acrimony in the juices, communicated by the absorption of pus from the lungs, and therefore it has been termed a putrid acrimony <sup>11</sup>. This is one of those generic

<sup>10</sup> “ An irritating acrimony brought and mixed in the  
 “ very liquids, may, and must be either removed or corrected by the use of the six non-naturals, using different means, according to the different nature of the said  
 “ acrimony—Boerhaav.” App. § 605. putrid fever proceeds from——“ and a very sharp acrimony.” Ibid. § 730.

Putridity and acrimony are the Gog and Magog of medical theorists. They are said to stalk abroad and kill their thousands and ten thousands : but upon nearer inspection they dwindle into mere men of straw, and are as harmless and inoffensive as their brethren in the city.

<sup>11</sup> “ The hectic fever now described, as accompanying a purulent state of the lungs, is perhaps the case  
 “ in which it most commonly appears : but I have never  
 “ seen it in any case, when there was not evidently, or  
 “ when I had not ground to suppose, there was a permanent purulency or ulceration in some external or  
 “ internal part. It appears to me to be always the effect  
 “ of an acrimony absorbed from abscesses or ulcers, but it  
 “ is not equally the effect of every sort of acrimony ; for  
 “ the scorbutic and cancerous often subsist long in the  
 “ body without producing it. What is the precise state  
 “ of

generic names we so frequently meet with in medical writers, to which there is no determined meaning affixed.

If by acrimony is meant bitterness, sharpness, saltiness, or particles, that by their angular and spiculated form, are capable of vellicating, corroding, and eating away the parts they come in contact with ; I must own, that I do not believe the particles of pus (allowing for argument's-sake, that they are absorbed into the blood) have any such properties. And of this we can only determine by its effect, where it has long laid confined. It has been found in the cavities of the body in large quantities. “ The cavities of the  
“ pleura, pericardium, &c. are sometimes  
“ observed to contain considerable quan-

“ of the acrimony producing this, I cannot determine,  
“ but it seems to be chiefly that of a viciated purulency.”

Cullen first lines. § 861. Ed. 4. 1784.

“ Cum mulierum mammas, ex scirro malè se habentes, abscindere necesse fuit, hujusmodi ægræ ex  
“ pure resorpto tabi maximè sunt objectæ.”

Clift. Winter. Com. § 380. An. 1782.

“ titles

“ tities of pus, without the least mark of  
 “ ulceration. Instances of which I have  
 “ seen. In one patient I found three  
 “ pints of pure pus in the pericardium,  
 “ without any ulcer on that membrane, or  
 “ on the heart. In another, the cavity  
 “ of the pleura on the right-side was dis-  
 “ tended with a pus that smelt more like  
 “ whey, than a putrid fluid, and the lungs  
 “ were compressed into a very small com-  
 “ pass; but there was no appearance of  
 “ ulcer or erosion, either on those organs  
 “ or on the pleura, but only under the pus  
 “ was a thin crust of coagulable lymph <sup>12</sup>.”  
 Dr. Lind tasted the serum of the blood of  
 the scorbutic patients before-mentioned,  
 and found it as insipid on the tongue as  
 the albumen ovi. Where abscesses have  
 broke in the mouth, and in purulent ex-  
 pectoration, I have never heard the pa-  
 tient complain of any sharpness in the  
 taste of the pus, though I have directed  
 their attention to that circumstance; it

<sup>12</sup> Hewson on the lymphatic system, p. 117.

has always been found soft, bland, and void of acrimony.

In some cases of compound fracture, lately published,<sup>13</sup> that were treated in a new and judicious manner; where the limb was rolled up, and the external air excluded, by frequently wetting the bandage with bals. traum. and not opened till after seventeen days; when the dressing was removed, a spoonful of pure pus was found in the wound, and the granulations of new flesh under it, perfectly sound, florid, and free from every appearance of corrosion. When external tumors are opened, and even those penetrating into the cavities of the body, if there is no disease present in the habit, the pain and inflammation soon abate, and there appears no sign of acrimony. When pus has been well diluted and agitated in warm water, so as to form an apparent homogeneous fluid, through a good microscope the particles will appear spherical and distinct from each other.

<sup>13</sup> Mudge on Catarrh.



These instances from authorities, which I presume will not be doubted, either for their veracity or accuracy, seem to prove, that pus or purulent matter in its natural state is not, at least in the cavities of the body, or when excluded from air, possessed of an acrimonious or corroding quality; and if not in a quiescent state, in large quantities, how much more improbable when circulating in small particles in the mass of blood? And, although it has been observed, that a piece of meat confined in an ulcer was dissolved, and the pus thereby became more foetid, it must be remembered, that the meat was a dead, inert mass, very dissimilar from any part of the living body, and therefore susceptible of being acted upon in a very different manner. The substance of the tubercles, and the parynchematus substance of the lungs when compressed and indurated, so as not to admit the air in respiration, or the blood to circulate through it, come near to the condition of the piece of meat, and  
are

are accordingly dissolved by the pus<sup>14</sup>. If this reasoning is founded on facts, it would seem, that the living principle must be destroyed in any part of the body before it is capable of being converted into pus<sup>15</sup>.

As one principal motive for my troubling the public with this essay, was, to remove, as far as my weak efforts could be effective, every idea of putrefaction and acrimony from the pulmonary hectic fever; the reader must not think I have detained him too long on this part of my subject; for as Celsus wisely observes of the theorists, “*Neque enim credunt, posse eum scire, quomodo morbos curare conveniat, qui, unde hi sint ignoret*”<sup>16</sup>. Were putrefaction and acrimony the in-

<sup>14</sup> We are very sensible that pus is *secreted* from mucus membranes when inflamed, and which proceeds from the exhalent vessels being acted upon as we have mentioned above. In violent aphthemia and gonorrhoea, a pure pus is produced, though no ulceration takes place.

<sup>15</sup> Hewson on the lymphatics.

<sup>16</sup> Cels. Præf.

offensive stalking horse of ignorance and laziness, the matter might not deserve such serious inquiry; but like many other unmeaning, unexplained, general terms in medicine, we receive them gratis dicta, build a pompous theory, and adopt in consequence, a method of practice, which, as might reasonably be expected, is attended with little credit to ourselves, and less benefit to our patients. But that I may not make use of idle declamation, and fall into the very error I wish to correct, I refer the medical reader to the common treatment of fevers termed putrid, of Phthisis Pulmonalis, and the long and vexatious train of nervous complaints, for a proof of these assertions.

From these considerations, I am disposed to conclude; 1st, That in the common acceptance of the term putrid, it cannot with any propriety of language, be applied to the pulmonary hectic fever. And as a confirmation of this opinion, it may not be improper to observe, en passant, that the remedies found most beneficial in  
those

those diseases denominated putrid, as bark, snakeroot, camphor, volatiles, cordials, wine, &c. have been fatally found, when used by the favourers of this doctrine, to be highly and irretrievably dangerous in the pulmonary hectic. 2d. That what the surgeons call laudable matter or pus, is a bland, smooth, white or yellow viscid fluid; of the consistence of cream, and void of acrimony or putrefaction: that the matter secreted in the lungs of persons in a confirmed Phthisis, being similar in every respect to the pus laudabile of the surgeons, is also void of acrimony and putrefaction, and that by these qualities it cannot (if absorbed into the circulation of the blood) occasion the pulmonary hectic fever.

C H A P. IV.

*Pulmonary hectic not originating from the absorption of pus into the blood—absorption produces a continued fever—use of the lymphatic glands—no absorption in the lungs—excretion from the lungs.*

**I**N the former chapter I have endeavoured to refute the commonly received opinion of putrefaction and acrimony in general, and particularly as applicable to the subject of this work. Having as I trust convinced the reader, that such principles exist only in the imagination of theorists, I shall proceed to enquire into the validity of absorption of pus into the mass of blood, the basis and ground-work upon which the other two pillars are erected.

The earliest authors, that have come to my hands, account for the pulmonary hectic fever, from the action of certain

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archæus



archæus and fermentation in the habit<sup>1</sup>.  
The learned author of the Phthisiologia,  
approaching

“ A hectic or habitual fever, is an effervescency  
“ and inquietude of the *Archæus membrorum*, or innate  
“ vital spirit in the solid parts ; procured by some offen-  
“ sive cause ; whereby the rorid substance of the body  
“ is wasted, and nutrition frustrated.”

Maynwaringe on Consumptions, p. 54. An. 1668.

“ But the blood being polluted from the lungs, causes  
“ them to be punished with a reciprocal affection, that is  
“ to say, from its peculiar pollution, because the blood  
“ in the veins receiving this purulent matter in every  
“ circuit, it immediately delivers it into the arterial ;  
“ from whence, whereas it cannot be sent enough away  
“ by sweat, or by urine ; it is brought back by the pneu-  
“ monic arteries to the lungs, where again being sepa-  
“ rated from the blood, it is every where conveyed, as  
“ well into the little bladders of the trachea, as into the  
“ lesser passages ; insomuch, that at length the whole  
“ frame of the lungs being filled, clefts or ulcers are  
“ formed consequently in many places, and all the other  
“ hollownesses are stuffed with frothy quitter.”

Willis on Consumption. An. 1684.

“ Atque hanc febrem putridam intermittentem, inter  
“ certissima signa Pathognomica Phthiseos confirmatæ  
“ semper habere soleo, quippe quæ, sicuti à pure in pul-  
“ monibus confecto ortum ducit, ita purulentix pul-  
“ monaris index est certissimus. Indèque provenit, quòd  
“ hæc

approaching nearer the level of common sense, supposes the purulent matter contained in the lungs, to be absorbed and carried

“ hæc fibris putrida intermittens Phthisin (quoties hunc morbum fatalem esse contingit) in extremum usque diem comitari solet.”

“ Sanguine enim, purulentis particulis sibi à maturatis tuberculis in circulatione per pulmones communicatis, perpetuò jam contaminato, natura ejusmodi heterogeneis particulis in tantum onusta, atque pressa, uti amplius eas ferre non possit, insurgit contra, pugnamque (seu paroxysmum febrilem) in earum extrusionem instituit, atque indies renovat.”

Morton Phthisiologia, p. 113. An. 1689.

“ Now when these tubercles come to suppuration, or break, and become ulcers, it may not be unlikely that the minute animals, which in the form of worms, caused all the mischiefs hitherto mentioned, may now in these ulcerations, as in proper places, receive a different external shape from what they before had, and by their new different parts or weapons, stimulate more fiercely, and enlarge those ulcerations, wounding or gnawing the mouths of the small vessels opening into them, and at length be able in their new shape to get into the mass of blood and other juices again, there to act a part different from what they did before, viz. stimulate all the nervous fibres of our small vessels to a great degree, and occasion all the rigors and horrors we

carried into the blood, and there producing a fever of the putrid kind. This opinion

“ feel in the beginning of the fits of putrid intermitting fevers.”

Martin on Consumptions, p. 69. An. 1722.

“ The hectic fever arises from particles of pus being received into the circulation, and nature striving to expel it, and from that conflict arises the hectic fever.”

Blackmore on Consump. An. 1724.

Home Principia. Med. 1762.

“ But when the putrescence proceeds from matter continually mixed with the blood from broken vessels, every thing irritating seems to be forbidden.”

Fothergill on Phthisis Pulm. Med. Obs. vol. 5. p. 353. An. 1776.

“ The hectic fever that attends this and some other chronic diseases, is evidently the effect of acrimony, and most commonly pus, absorbed and carried into the circulation.—In the pulmonary consumption, or at least in the third stage of it, the fever induced is truly of the putrid kind.”

Simmonds on Consumption. An. 1780.

“ La fièvre étique est causée & entretenue par le pus des ulcères qui étant résorbé dans les vaisseaux du sang & de la lymph, fait dégénérer ces précieux liquides, les corrompt & les réduit enfin en humeurs purulentes, qui conduisent les malades à une fin fatale.”

Traité de Phthisie Pulmonaire par M. Raulin, M.D. Paris 1782. 8vo.

“ Balsamica,

opinion has been followed, with few exceptions, by every succeeding author. To enumerate the whole, would only swell this work unnecessarily, and trespass upon the

“ Balsamica, antiseptica, non modo propter viscerum  
 “ vomicas hæcticam symptomaticam causantes (de qua,  
 “ ut alibi dixi, hic non agitur) sed etiam ad *universæ hu-*  
 “ *morum massæ putredinem*, quam subinde hæctica citra  
 “ ulcera inducit, vel externorum certe ulcerum sanies  
 “ resorpta, vel alius quivis pravus humor in cachecticis,  
 “ suppeditat, prævertendam, haud exiguè sunt utili-  
 “ tatis : cujusmodi sunt agrimonia, hederæ terestris, virg  
 “ aurea, veronica, &c.”

Winceslai Trnka. Hist. Feb. Hæcticæ, p. 271.

Vindobonæ, 8vo. An. 1783.

“ The circumstances which kept me longest in sus-  
 “ pence, were the several hæctic symptoms, which I  
 “ could not readily account for upon any other supposi-  
 “ tion, than that of matter absorbed from some ulcer ex-  
 “ isting in the lungs ; and indeed the appearance of what  
 “ was thrown up by expectoration, which so much re-  
 “ sembled that discharged from an abscess, seemed not a  
 “ little to countenance such a suspicion”——and again,  
 “ Till this, however, could be effected, it was reason-  
 “ able to imagine, that absorption might take place, when-  
 “ ever the discharge from the lungs should happen to be  
 “ suspended ; and as this was always the case during the  
 “ night, it seemed highly probable that some particles of  
 the

the reader's time and patience to no purpose, a few only will be necessary to prove the truth of the assertion, and taken at different periods, will shew the continuity of the doctrine.

It is not a little surprising, that this opinion should have been, during a century implicitly adopted, as if it had descended from one author to another in hereditary succession, without venturing to enquire, whether the fact was so or not; for I do not remember to have seen any attempt to prove it by reason or argument. As I consider it of the utmost importance in the cure of this disease, to remove every idea of putridity, and to establish a newer, if not a juster rationale of practice, I shall take the liberty to investigate the subject, divested of the venerable garb it has acquired from antiquity. "For

" the retained matter were actually absorbed, and occasioned those hectic symptoms, which generally came on after the colliquative sweats were gone off."

Dr. Chapman on Pulmonary Complaints. Med. Commun. p. 272. 290. An. 1784.

" nothing



“ nothing in the practice of medicine can  
 “ be attended with more dangerous con-  
 “ sequences, than to ground the cause of  
 “ diseases, upon an imaginary founda-  
 “ tion<sup>2</sup>.”

It is an axiom, I believe will not be disputed, that similar causes, will always produce similar effects.

If therefore the fever attending consumption of the lungs, were caused by pus being absorbed, and carried into the circulation; a fever of the same kind would take place from the supposed absorption of pus in other diseases. The contrary must have been evident to every attentive practitioner.

In an abscess of the liver or psoas muscle, in a suppuration of the kidneys, or any internal part<sup>3</sup>, the fever is continued  
 with

<sup>2</sup> Stephens on Consumption, p. 131. An. 1761.

<sup>3</sup> “ In an abscess where the whole internal surface of  
 “ the os ilea was carious, a slow and continual fever,  
 “ added to the large suppuration, soon conducted the pa-  
 “ tient to his grave.” — In a large abscess in perenco,  
 which

with frequent rigors at irregular periods, but without regular remissions and morning sweats. If it is alledged, that the pus in those cases is of a different quality from that in ulcered lungs; I answer, that in its simple natural state, pus in all cases is nearly the same, that is, what the surgeons call laudable matter; but that according to the degree of inflammation, tone of the fibre, and situation of the abscess, its quality will vary; and that in the Phthisis Pulmonalis, the matter spit up is of a different colour and consistence, according to the period of the disease.

In recent affections of the lungs, when their substance is inflamed, and before tubercles are formed, the fever is continued, and similar to that attending inflam-

which extended to the os pubis and ischium; he says,  
 “ the fever was continual, the fever never left him.”

Le Dran's Observ. p. 266. 238. An. 1740.

“ The Chronic (Hæpatitis) often takes place without  
 “ being known till after death, when large abscesses are  
 “ found in the liver.”

Cullen first lines. § 414. Ed. 4. An. 1784.

mations

mations of the pleura and other parts of the body. When the organ becomes more diseased, when tubercles are formed, and the substance is more or less impervious to air in respiration, but before any pus appears in the expectoration, the fever changes its type; has a remission of many hours in the forenoon, and exacerbation at noon or evening, continues all night, and terminates about four in the morning, by sweat on the breast and upper parts of the body. If then the pulmonary hectic fever were occasioned by the corrosive acrimony of pus absorbed from the diseased lungs, from whence does it proceed before the tubercles are suppurated, or any pus formed in the lungs? For that the fever is completely formed in recent affections, before any symptoms have indicated the existence of matter, or when there has not a particle appeared in the expectoration, nay, when very little has been spit up, and that merely white phlegm, I appeal to the experience of every practitioner conversant with this period

period of the complaint. In this form it has frequently occurred to me, and to many of my medical friends, with whom I have conversed on the subject; but though it generally passes unnoticed, and is supposed only a symptom of cold, that is no argument against its existence.

On the other hand, if absorption was really the cause of this fever, it would be present always, and in every case where matter, real pus, is spit up from the lungs; but we have instances, and from the best authority, of matter being spit up during many years, without any symptom of hectic fever, or even injury to the health of the patient, probably from a single vomica<sup>4</sup>. If absorption were the usual and common

<sup>4</sup> Dr. Clossy relates a case of abscess in the liver, where the matter was coughed up to the quantity of a pint a day, and the same passed by the bowels, thick and foetid. There was no hectic fever and the patient recovered without injury to the lungs. It continued from the end of January till April.

See Clossy's Obs. sect. 3. An. 1763.

Galen



common process of nature, how are we to account for the absence of its effects in those cases? Shall we say, because the substance of the lungs did not become impervious to air, there was no obstruction to their regular excretions?

Did the hectic fever owe its origin to the absorption of pus, it might reasonably be expected, that when a large quantity is excreted into a cavity of the body, as has been before observed, part of it would be taken up by the absorbent vessels, and being mixed with the mass of blood, produce a fever of the hectic kind; that is with remissions and morning sweats, and wasting of the body, which I esteem the characteristic signs of the pulmonary hectic: but this also is contradicted by experience. In such collections of matter, there frequently happens no fever of any kind.

Galen Method. Medendi. lib. 5.

Cullen first lines. § 854. Ed. 4. An. 1784.

Willis on Vomica.

See the Case at the end of chap. 8. of this work.

In



In the compound fracture before-mentioned, when the matter was confined in the wound seventeen days, no mention is made of any fever being present.

In abscesses on the external parts of the body, where a great discharge of matter takes place; and in amputations of the lower extremities, where a large surface is constantly covered with pus, the symptomatic fever however violent, has not the most distant affinity with the pulmonary hectic.

In a very uncommon case of a fractured skull, that came under my own inspection, occasioned by the wheel of a loaded waggon passing over the head; where the whole scalp of the right-side was torn from the bone; the fracture was extensive, penetrating to the basis of the skull, the depression large, the wound of a vast extent, with great loss of substance. It happened in the end of July, when the weather was exceedingly hot. The symptomatic fever was very considerable; and from the heat, and the patient's particular

ticular situation, he had two attacks of fever the August following, truly inflammatory and continued. The discharge from the wound was very great, varying according to the state of his health. It might have been expected, considering every circumstance, that had absorption of pus been consistent with the animal œconomy, it would have taken place here; but no symptom of hectic appeared, even in the extensive meaning of the word. In ten weeks from the accident, the wound was healed, and the patient in perfect health.

From weighing these circumstances, is it fair to conclude, that if ever pus is carried by the absorbent system into the mass of circulating fluids, that it produces a fever of the continued kind, differing in essential points from the pulmonary hectic; and that this last is a fever sui generis, arising from a cause peculiar to itself?

When the venereal virus is absorbed by the lymphatics, it stops in the glands of the groin, and produces a bubo. In a case  
that

that happened in the Store-street lying-in Hospital some years since, when the matron was inoculated with venereal virus in delivering an infected patient; the matter stopped in the glands situated in the axilla, producing great tumor, and violent inflammation in the arm. When matter is absorbed from issues or ulcers on the legs, it stops in the glands situated on the upper part of the thigh or groin. Some small glands about the inferior costa scapulæ swelled by the absorption of matter from a blister on the back<sup>s</sup>. In that deplorable malady, a cancer in the breast, the axillary glands are generally affected. Milk stagnating in the breasts, frequently occasions swellings in these glands. In the inoculation for the small-pox, the glands in the axilla of the arm, where the matter was inserted, swell and grow painful, before any fever takes place in the constitution. In short, wherever matter is absorbed by the lymphatics, it generally stops in some lymphatic gland, in its passage to the tho-

<sup>s</sup> Hewson on the lymphatics.

racic duct, the common receptacle of the chyle and lymph.

“ The lymphatics of the lungs, are in  
 “ two sets, one of which passes in the  
 “ posterior part of each lobe, by its root  
 “ into the thoracic duct, near the middle  
 “ of the therax; and the other set passes  
 “ from the fore part of each lobe up  
 “ towards the jugular and subclavian  
 “ vein. Some of the lymphatics on the  
 “ posterior part of the left lobe pass under  
 “ the aorta, to get to the thoracic duct<sup>6</sup>.”

It is not necessary, that I should enter into the dispute, whether the extremities of veins act as absorbent vessels; the negative, I believe, is generally acknowledged. By that means therefore, pus cannot enter the blood; and if it is absorbed by the lymphatics in other parts of the body, it would seem to me, that the glands are placed by nature upon all those vessels, to act as strainers, to prevent any improper matter entering the circulation; pus then cannot act as a stimulus upon the heart in exciting fever.

<sup>6</sup> Hewson on the lymphatics.



If matter were absorbed by the lymphatics in the lungs, particularly by those passing from the upper part, which is first diseased; is it not probable, that the pus would stop in the lymphatic glands about the clavicles; [as we have before shewn it is its nature to do] and that swellings there would be a constant attendant upon the disease? Whereas, except in scrophulous habits, these glands are seldom affected.

A late ingenious young physician <sup>7</sup> indefatigable in medical enquiries, in opening a body to examine the thorax, happened to scratch his fingers in several places with the broken ends of the ribs; the next day he opened a body that had some symptoms of the venereal disease; in consequence of the absorption of matter, from one or both of these bodies, he had troublesome sores on his fingers for some time, and afterwards glandular swellings on the back of his hands, arm-pits, and under the

<sup>7</sup> Dr. Stark.



lower jaw. Those on the hands and under the jaw, were frequently cut off, and as often grew up again, and the others resisted every application for two years. During the whole time his general health was not otherwise affected, than by the medicines he used to remove so troublesome a complaint.

In this case, whether the absorption consisted of pus, of putrid serum, or miasmata floating about the bodies, it was evidently intercepted by the glands, and went no farther; for had it entered the circulation, there can be no doubt the effects must have been a fever of a bad kind; as none appeared, it is fair to conclude, the matter did not enter the blood, but was stopped and retained in the glands, and in them exerted the whole of its baneful influence. The Infinitely Wise Constructor of our bodies, seems to have placed the lymphatic glands as centinels to intercept whatever is inimical to our health; which, without such a guard, would be daily, nay, hourly liable to be

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injured: not only putrid and offensive matter floating in the atmosphere, but even what is sweet and delicious, might have this pernicious effect, we might literally, “die of a rose in aromatic pain.”

In low fevers, that are commonly stiled putrid, I have frequently met with swellings in the inguinal glands, which I was certain did not proceed from a venereal cause. They inflamed, were painful, and in some cases dispersed; in others suppurated, and healed without difficulty. Perhaps the buboes in the plague and other pestilential diseases, are produced in a similar manner.

From the instances which have been adduced, is it reasonable and fair, to draw this conclusion? That where matter, or offending miasmata are taken up by the lymphatic system, such particles, for the most part infect some lymphatic glands which are situated between the place of absorption and the thoracic duct; and therefore as we do not usually find swellings of the lymphatic glands, situated  
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ed in the direction of the pulmonary lymphatics, in the neck, about the clavicles, accompanying consumptions of the lungs and hectic fever; the lymphatics of the lungs passing through these glands, do not absorb pus or purulent matter in that disease.

It has been observed, that the fluid secreted by the exhalent vessels into the cavities of the body (those of the brain excepted) and the fluid contained in the lymphatic vessels, are in every respect similar; both jellying when exposed to the air, in the same given time; and both acted upon in the same manner and degree by disease. The fluid that is exhaled by the lungs in respiration, agrees with the contents of the lymphatic vessels, in no respect but clearness and thinness; for it never jellies when exposed to the air, and is always of the same consistence; varying in quantity according to the heat of the body, or disposition of the atmosphere.

A large quantity of this fluid is dis-

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charged

charged during respiration; are we to conclude, that either it is excreted into the air vesicles of the lungs by a particular system of vessels, or that the lymphatics entering the substance of the lungs, (if that is a fact, of which I have great doubts) do not act as absorbents?

The more we carry our researches into the structure of the human body, the more we are convinced that every part is designed, by the Wise Contriver, to serve some determined and distinct purpose; and which cannot be so properly performed by any other. As the fluid secreted into the air vesicles of the lungs is designed to be expelled the body, perhaps as a vehicle to some other principle (phlogiston) by the means of the atmosphere in the act of respiration, which is continued without interruption during life; it does not seem necessary, that any system of vessels should be adopted for reconveying it into the circulating fluids, from whence it had just been secreted. In obstructions of other secretions and discharges

charges from the human body, by the wonderful contrivance of the machine, some other system of vessels act as auxiliaries to prevent the evil effects: but as an obstruction to the excretion from the lungs by means of the atmosphere, cannot happen during the life of the animal, instituting such auxiliaries would have been an instance of superabundance, of which we have no example.

I have thus endeavoured to combat and overturn the long-received doctrines of putrefaction, acrimony, and absorption of matter, being the cause of the pulmonary hectic fever, and I trust with some degree of conviction to the reader's mind. Whatever merit the execution may have, becomes not me, even to think of; but the novelty of the attempt cannot be disputed; and future observations will be the test how far it is founded upon just principles.



## C H A P. V.

*New theory of pulmonary hectic—what remains of the lungs when the disease proves mortal—air phlogisticated by respiration—phlogiston what—discharged from the habit in breathing—experiments on different kinds of airs.*

THE arguments that have been used in the two preceding chapters has proved, I hope, to the reader's satisfaction, that the absorption of pus from the lungs into the blood, or the putridity, or acrimony of that pus, is in no way concerned in producing or maintaining the pulmonary hectic, as we have been taught to believe by authors of the first reputation in the profession. Other causes have been assigned, but not generally received, such as animalculæ<sup>1</sup>, the unequal wasting of the muscular strength in comparison

<sup>1</sup> Marten on Consumption, p. 40. An. 1722.

of the contractile power of the heart, and others. But these appear so extravagant and inadmissible in the pathology of the present improved state of the art, that they do not merit a serious consideration. I shall therefore proceed, with the reader's indulgence, to lay before him what has appeared to me the cause of this fever. How far this theory may be found more rational, more just, or more consonant with pathological reasoning, than those that have gone before it, becomes not me to determine. Experience, the best and only criterion of medical precepts, will perform that task. One merit, and one only it claims, and that is novelty; as I believe the idea has never before been published by any author; and as the improvement of the method of treating a dangerous disease is the sole motive of this work; I am perfectly willing and ready to relinquish my opinions, should they be controverted by fair and candid reasoning: but general and undistinguishing objections, evidently proceeding from  
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a consciousness of censuring with impunity, are as much beneath, as undeserving my notice.

It has been computed, that a greater quantity of perspirable matter is discharged by the lungs, than by the whole surface of the body <sup>2</sup>. The insensible perspiration

<sup>2</sup> “ But taking the whole year round, the perspiration  
 “ made by the skin and lungs exceeds their absorption  
 “ by about forty ounces a day in Great Britain ; which,  
 “ though it has been commonly reckoned the total of the  
 “ perspiration, is really no more than its excess above  
 “ the quantity of fluid taken in by the absorbent veins  
 “ of the skin, fauces and lungs.”

Whytt, motion of the fluids, p. 250. 4to. Ed. An. 1768.

“ When we endeavour to expire with all our power,  
 “ the whole surface of the vesicles of the lungs may sustain a pressure equal to 420 pounds weight.”

Whytt on vital motion, p. 41.

Dr. Hales (Hæmest. vol. 2.) supposes the sum of areas of the vesicles of the lungs to be equal to 150 square feet, which is infinitely more than the surface of the body ; that being estimated at only 15 square feet. He supposes two gallons of air, breathed to and fro two minutes and a half, becomes unfit for respiration. That quantity is equal to 522 cubic inches. In the two minutes and a half he breathed fifty times ; and found the moisture conveyed from

piration passes off from the pores of the skin, at all times, without our being conscious of it; but when any increase of that discharge takes place, either by exercise, warmth, drinking warm liquors, or taking sudorific, and therefore heating medicines, the pulse is always quickened, and a temporary fever takes place.

When the lungs from inflammation, or the formation of tubercles or vomicæ, are rendered in part impervious to the air

from his lungs in that time to be equal to 17 grains; which in twenty-four hours amounts to twenty ounces three drachms and twelve grains. But this must vary according to the quickness of the circulation, and the condition of the atmosphere, being more or less capable of dissolving moisture. For, according to Professor Hamilton, in his Phil. Essays, the common atmosphere has the property of dissolving moisture in the same manner as water dissolves sugar and salt; that it dissolves most when in action, and when so dissolved, the clearness of the air depends upon its warmth; for cold will precipitate it again in the form of vapour or mist, as may be proved by breathing in a warm room, and in the frosty air; in the latter the breath is visible, in the former it is not.

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in inspiration ; the usual quantity of fluid cannot be carried off by the action of respiration ; the quantity so retained, will remain in the habit till excreted by some other emunctory. That quantity of fluid so retained in the habit, (together with phlogiston) I conceive to be the great, and principal cause of the pulmonary hectic fever, which invariably abates, as soon as it is discharged by the pores of the skin : and as the impediment to its exit by the lungs continues, so the fever is daily renewed, that the constitution may be relieved from its accumulated burthen. As the lungs by the increase of the disease, become more and more incapable of exhaling the usual quantity of lymph, we find the morning sweats proportionably increased, and the exacerbations of the fever more violent ; till towards the close of the disease, when the patient is exhausted to so great a degree, and the muscular force, and action of the vessels so much weakened, as probably to be unable to produce such a degree of fever as is  
necessary



necessary to force the fluid through the pores of the skin; it falls upon the intestines, by their well-known sympathy, and produces a diarrhœa. We then perceive the fever and sweating considerably diminished, and the expectoration of purulent matter in less quantity. But when it happens that a diarrhœa does not terminate the complaint, as I have before observed is sometimes the case, or at least in a very small degree, which is easily restrained by astringents; then we find the fever and perspiration continue their violence to the last day of the patient's life. In both cases the spitting diminishes towards the end, not because the matter, according to the old opinion, runs off by the bowels, and is seen in the stools; but because the substance of the lungs is so much diminished, as not to furnish materials for the usual quantity of matter; for though the pus in general is a secretion, yet the substance of the lungs being by pressure indurated, and deprived of the vital principle, is melted into pus, as  
has

has been sufficiently proved in a former chapter. Add to this, that when the patient is nearly exhausted, in the last days of his fatiguing and distressing conflict, they seem not to have sufficient strength to pump the matter up.

In those who have fallen victims to pulmonary consumptions, the portion of the lungs remaining pervious to air, is so small as not to exceed one fourth part of their original substance <sup>3</sup>.

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<sup>3</sup> “ Et quæ mirabilior est Marcii Gerbezii, qui eundem pulmonem dexterum totum, una cum aspera arteria præ putridine in pulvem collapsum, deprehendit. Et quanquam Jo. Tackius ita vidit plane corruptum, ut latus dexteram pulmone destitutum fuisse, scripserit: majori tamen admiratione afficeret Cl. Ritterus junior qui in sinistro latere alba purulenta materia ad medium usque repleto tradit, pulmonis illius, qui totus fere erat consumptus, oscula vasorum fuisse aperta; nisi Celeberr. Anatomicus Hallerus confirmaret, multum aquæ subcœtidæ, albuminis instar viscidæ, offendisse, in eaque arteriam asperam, et vasa majora arteriosa, et venosa quasi resecta, patulo fine hiantia, ut sanguinis effluxum quid moraretur, ægerime invenires. Nam Platerus qui non semel in  
“ Phthisicis

In the description of the pulmonary hectic it was observed, that although the fever abates very considerably upon breaking out of the morning sweat, yet a certain quickness of the pulse remains during the interval. This is probably occasioned by the progressive formation and inflammation of tubercles, one set after another; of this the patient is frequently sensible, by the pain and foreboding of the

“ Phthisicis nihil penitus de pulmonibus alterius lateris  
 “ superfuisset, deprehenderat, callo saltem aliquo vasa  
 “ cordis quæ illuc pertinebant, et arteriæ ramos obturata  
 “ conspexit, quemadmodum in hac 7<sup>ma</sup> sepulchreti sec-  
 “ tione leges. Sic Columbus inveni, inquit, partem  
 “ thoracis pulmone destitui, hoc est, minimam pulmo-  
 “ nis portionem adesse: quod vero reliquum erat cavi-  
 “ tatis ab aqueo humore occupabatur. Sic alias quoque  
 “ Valsalva cujus alibi proferetur observatio, nullum pri-  
 “ mo aspectu esse credidit pulmonem; adeo sub multo  
 “ humore contractus erat! Sic, ne longior sim; laudatus  
 “ Hallerus in hydrope pectoris pulmones vidit adeo com-  
 “ pressos et innatos pleuræ, ut nullos adesse incauto vi-  
 “ deretur, certe tribus lineis vix crassiores.”

Morgagni de sedibus et caus. Morb. lib. 2. Ep. 22.  
 Art. 7. An. 1762.

breast,

breast, particularly on a full inspiration, or even motion of the thorax.

Ever since men began to reason upon cause and effect, it was known, that the common air, by being breathed often, and passing many times through the lungs, became at last unfit for the purposes of respiration, and if persisted in, the person expired: that is, if an animal was confined in a cube of any dimensions made air-tight, in a certain given time, by some property being communicated to or from the air, the animal would cease to live<sup>4</sup>.

The

<sup>4</sup> By some ingenious experiments lately published on this subject, it was found that a person by breathing one hour into a bottle, containing three pints and a half, collected in that time 124 grains of moisture, which makes 6 oz. 1 dr. 36 gr. in 24 hours. It is to be observed, that the three pints and half of air would soon become saturated with moisture, and although it was condensed on the sides of the bottle, yet as fresh air was continually thrown in, the air in the bottle must of course escape to give it room—and as all the moisture would not be condensed, a great part would escape by that means—consequently a much larger quantity of moisture is excreted by respiration than is here supposed. See Cruikshanks Letter on Absorption to P. Clare, p. 116.

The

The cause of this phœnomenon has been

The Abbè Fontanna could only breathe 40 times in 352 cubic inches of air. (Ph. Transf. v. 69.) Supposing we expire 20 times in a minute; in the above hour, near 50 gallons of air must have passed into, and out of the bottle; but if we allow 30 cubic inches to pass into the lungs \* at each inspiration, the quantity will be more than three times as much.

\* Cavallo on Air, p. 391.

“ Since air which has passed through the lungs, is the  
 “ same thing with air tainted with animal putrefaction;  
 “ it is probable that one use of the lungs is to carry off  
 “ a putrid effluvium, without which, perhaps, a living  
 “ body might putrify as soon as a dead one.

Priestley on Air, 1776 to 1778.

Putrid effluvia, in some cases of diseased habits, is expelled from the lungs by respiration.

Cavallo on Air, &c.

A man perspires in a day five eighths of what he eats and drinks. Sanctorii Med. Stat. Aph. 6. sect. 1.

The ingenious Mr. Cruikshanks found, that by confining his hand in a bottle, he collected in an hour 30 gr. of moisture; which, supposing the whole surface to perspire equally, he estimates at 7 pounds 6 oz. in a day. He was at rest, and the thermometer at 71° in a room—after using exercise, it amounted to 12 pounds in a day. In the evening at nine o’clock, the thermometer at 62° he only collected 12 gr. in an hour.

Letter to P. Clare on Absorption, p. 112.

variously



variously accounted for. The most obvious reason was the quantity of moisture discharged from the lungs; this was apparent to the meanest capacity; and to this the learned added a certain *pebulum vitæ* extracted from the air into the blood, by which it acquired the red and florid colour.

The many experiments made upon air, with an astonishing degree of exactness, which has employed the time and attention of many eminent philosophers of late years; has thrown a great degree of light upon this part of our subject. Experiments on air have not only ascertained its properties, but also its component parts, it being as easy to detect the unwholesome air of different places, to determine in what proportion the bad quality bears to the good, as it is to make experiments on any other fluid.

“The principal use of respiration” (says a learned and ingenious author) “is to carry off the phlogiston which the blood acquires during its circulation through  
“the

“the body<sup>5</sup>”. Phlogiston is a general principle in nature, it is contained in all matter in a dormant state, and becomes visible in fire, of which it is the food and life. Air saturated with this principle is inimical to life. A candle confined under a glass receiver, in a few minutes as certainly goes out, as if it had been immersed in water. For air is capable of receiving, or dissolving but a certain quantity of this principle, and then becomes saturated with it in the same manner as it is saturated with water; with this difference, that it retains phlogiston till a proper object offers on which to deposit it, but precipitates water in every situation. Air saturated with phlogiston kills animals, and extinguishes fire and candle.

To determine the existence of phlogiston being in the air expired from our lungs, the following experiments were made, assisted by a very ingenious lecturer in natural philosophy<sup>6</sup>. And though I

<sup>5</sup> Priestley.

<sup>6</sup> Mr. Walker.

knew they had been made before, I thought a repetition necessary in order to strengthen the conclusions that will be drawn from them.

1. A vessel of air after having been passed through the lungs many times, extinguished a lighted taper, instantly on being immersed in it. Into this vessel of air so respired, a few sprigs of growing mint were put, and being reversed in water, it remained one hour, when the lighted taper burned perfectly well at the bottom of the vessel.

2. Two measures of common atmospheric air were put into a glass tube, previously filled and immersed in water, to this was added one measure of nitrous air, a brown effervescence took place, and in three minutes the air was diminished one twenty-seventh part of the whole: that is, the common air absorbed the phlogisticated air, and was thereby so much diminished. This was meant as a test.

3. I breathed a pint of air, contained in a bottle immersed in water, through a  
glass

glass syphon, with my nose stopped, six times: the last inspiration with extreme difficulty, the pain and oppression at my breast being very great. Two measures of this air, and one measure of nitrous air being mixed, as in the preceding experiment, the water rose in three minutes only to five twenty-sevenths below the gage, so that this respired air was six twenty-sevenths worse, or more phlogisticated than the common atmosphere.

4. I expired through quicksilver a measure of air from my lungs, being the last part of as violent an expiration as I could make with my utmost force (that being found to contain more fixed air than the first part) and after washing it well in water, we found it was diminished one-seventh of the whole. The diminution was fixed air, or aerial acid, which from its great affinity to water, readily unites with it. Air expired through lime-water in a syphon, renders it milky, and precipitates the lime to the bottom, which is true calcarious earth, and will ferment with acids.

5. I confined my hand in a bladder, tied close round the wrist, one hour, and then removed the air into a glass vessel in water. Two measures of this air, and one of the nitrous air, were mixed as before, and the result was exactly the same as with the atmospheric air in the 2d Exp. The phlogiston in the air not being increased, proved that none had escaped from the pores of my hand<sup>7</sup>.

It has appeared from very respectable authority, that a large quantity of lymph, or pelucid fluid is expired from the lungs, which any person may be convinced of by breathing against a looking-glass, or any smooth, hard, cold body. And by Exp. 3. it appears, that the air expired being more phlogisticated by six twenty-sevenths, or

<sup>7</sup> Fixed air does not escape from the pores of the skin, as is asserted by Dr. Ingenhoufz and Mr. Cruikshanks, after examining their experiments, and making others, Dr. Priestley concludes, "I cannot therefore but see reason to conclude, as I did before, that it is only *respiration*, and not the perspiration of the body that injures common air."



something less than a fourth-part, than the air inspired, it is evident that a large quantity of phlogiston does escape from the body by means of the air in respiration. The quantity of lymph and phlogiston so discharged, will vary in quantity and time respectively, according to the state of the atmosphere, heat of the body, &c. Now the expulsion of both these fluids will be diminished in proportion as the lungs shall become impervious to air, or be diminished in their substance, and the quantity so retained, I presume, constitutes the pulmonary hectic fever.

To say that so powerful and active an agent, as phlogiston is known to be, should be retained in the body without injury, would be denying the most obvious effects. In proportion as the lungs become diseased and wasted, so proportionably the retention must be, and so proportionably violent we find the fever and consequent sweats. And in the early part of the complaint, we have shewn, that the pulmonary hectic fever is completely formed, when no

pus is spit up, and probably before any is secreted. That tubercles are then formed, I think there is no doubt, and, although I will not take upon me to determine, that while there is no hectic fever, there are no tubercles, yet I believe they are always present with the fever.

Phlogiston we have observed is contained in all matter, but particularly in animal bodies; we receive it from the air, in our food, and in every thing we use. All nature is in circulation, always striving to maintain an equilibrium. The superabundant quantity that is contained in our bodies is dissolved, by the air acting as a menstruum in the vesicles of the lungs, and receiving it from the blood circulating through that organ; how this is performed we cannot say, but as phlogiston is a fluid more subtile than the electric, it is probable that in a similar manner, it passes by mere contact<sup>s</sup>.

And

<sup>s</sup> “ Six measures of nitrous air added to two measures  
“ of dephlogisticated air, mixed and transferred to lime-  
“ water;

And it is no objection to this reasoning, that when the disease is cured, after a considerable portion of the substance of the lungs has been destroyed; that the blood will be equally liable to obstruction, and the expirable matter retained in the habit; since we have daily instances of that wonderful principle in nature, always labouring for her preservation, and accommodating herself to particular situations. This principle is evinced not only in the animal creation, to a wonderful degree, but also in the vegetable.

In whatever manner we view this sub-

“ water; the lime precipitated, till the whole was reduced to one-tenth nearly; so that nine-tenths of this dephlogisticated air was evidently converted into fixed air; and since fixed air did not pre-exist in the dephlogisticated air, it was evidently produced by the union of the phlogiston of the nitrous air, with the truly dephlogisticated part of the dephlogisticated air.”

Kirwan in *Philos. Trans.* vol. 72. part 1. An. 1782.

A similar process is supposed to be carried on in the lungs, where the phlogiston in the blood unites with the dephlogisticated part of the atmospheric air, and forms fixed air, which is discharged by respiration.

ject,

ject, I think the conclusions will hold good. For, whether the air in respiration attracts phlogiston from the blood; whether the blood, according to the old opinion, attracts the pabulum vitæ from the air; or whether the air becomes saturated with moisture from the lungs; in either case, whatever principle the blood receives from or communicates to the inspired atmosphere, that principle will be diminished in proportion as the vesicles of the lungs shall become impervious to the air. View the argument in any light; as it is absolutely necessary for the preservation of life, that the blood, after receiving the chyle and lymph, poured by the thoracic duct into the left subclavian vein, shall pass through the lungs; it is very certain, when the passage is impeded by the diseased state of that organ, the air will not come in contact with the blood vessels at so many points; and if it is true, what we have been attempting to prove, that certain matters are expelled the system in breathing; that matter will be retained



retained proportionably to the extent of the disease, and I hope it will appear reasonable to conclude, the matter so retained will produce the fever attending consumption of the lungs.

When a diarrhœa appears in the last stage of the disease, it has been accounted for, by the pus being absorbed, and running off by the intestines. At this time the lungs are considerably reduced and wasted, more than half their substance having been dissolved into pus and expectorated. Allowing that the lymphatic vessels do absorb pus from the lungs, these vessels must diminish in the same ratio as the substance of the lungs. Supposing then, that the diarrhœa proceeds from the absorption of pus; why does it not appear more early in the disease, when there is a greater extent of surface covered with matter, and when a larger number of the absorbent vessels remain uninjured? Whereas this symptom does not appear till after the hectic fever and colliquative sweats have continued long, and the lungs diminished



diminished in their substance, are as it were drowned in purulent matter. Let me ask the supporters of the old doctrine, if absorption really takes place, would it not do so when the system of vessels by which it is performed is in nearly an entire and sound state, rather than when it is reduced in the proportion of three, or perhaps four to one? I must beg leave to press these considerations on the reader's mind, and when he has bestowed that attention which the subject deserves, leave him to draw his own conclusions, not doubting but it will be favourable to my hypothesis.

Allowing the absorption of pus to cause the pulmonary hectic (as to its qualities of acrimony and putridity, it will not be necessary, I believe, to say more on those points) I would ask from whence arises the regular intermissions in the morning and succeeding exacerbations? Is not the lymphatic system always in a state to absorb matter, continually applied to their extremities? As it is most reasonable to  
suppose

suppose they would act with the greatest vigour, when the body is at rest in bed; when the lungs are agitated with the incessant coughing, forcing as it were the purulent matter into their apertures, and when there is the greatest quantity of pus collected in the ramifications of the bronchiæ; would not the fever consequently be more violent in the forenoon? On the contrary, the fever goes off, or greatly abates about four or five o'clock in the morning, and the remission continues till noon, that is, during five or six hours. When they first get up, they discharge a large quantity of pus either by coughing, or by the operation of an emetic; during the rest of the day very little, if any is brought up, whatever degree of cough there may be; but yet the fever comes on regularly in the afternoon, when for six hours before there could not have been any absorption. How are we to account for the inactivity of the absorbent system, when such a quantity of pus was present in the lungs! Surely, if it really was the property

property of these vessels to take up pus, they would continue to do so, whilst any was applied to their extremities; and if that absorption caused the fever, it would be continual as its cause.

It is worthy of observation, and perhaps it may strengthen the idea of pus being secreted, that in the advanced state of the disease, the patient generally coughs long and violently in the night and towards morning, and shall bring up nothing but phlegm or mucus, and that in small quantity; when at length the pus appears, and then it will flow out in almost a continued stream with only an effort to cough, hauking, or merely putting the body into a favourable position, which is known by experience. Is the agitation of coughing necessary to force the pus out of the vomica, into the ramifications of the bronchiæ, or is the agitation necessary to its existence, to the secretion of it? However light and trifling these circumstances may appear to superficial readers or practitioners, they deserve great attention;

attention; for the little we are capable of knowing concerning the cause of diseases, must be acquired by an unwearied, and diligent attention to every the minutest symptom.

In a former chapter, we brought several instances to prove, that when pus, or offending miasmata were absorbed into the system, that the matter was arrested in the first lymphatic gland, between the place of absorption and the thoracic duct. But what becomes of the matter absorbed from the lungs? We find no swellings in the glands lying in the direction of their lymphatics, and there is no appearance of it in the perspiration. Indeed an author of considerable reputation<sup>9</sup>, says it is formed in the blood, and then poured into the bronchiæ; but I presume the reader will not expect a refutation of an idea so unfounded, and contrary to every thing we know of the animal œconomy.

When we consider that pus is a viscid,

<sup>9</sup> De Hain. Ratio med.



opaque, tenacious fluid, specifically heavier than water; it does not seem adapted to enter capillary vessels, whose apertures are so small, that in the intestines, where they are in greatest number, they are not discoverable with the assistance of the best glasses.

On the other hand it has been computed, that a person in common health exhales from his lungs, more than twenty ounces of fluid in twenty-four hours. If from diseased lungs a considerable part of this fluid is retained in the habit, is it not consonant to just pathological reasoning, that a fever should be raised to expel it, by the most common outlet, the pores; and that this fever should continue till the cause producing it is removed? That in consequence of the morning sweats the fever goes off, and the remission continues some hours; till the former cause accumulating in the system, it is again excited, and runs the same course as before. As the disease in the lungs advances, a greater quantity of fluid will be retained,



retained, and we find the fever and morning sweats, accordingly increase in their violence and duration: till at length the natural strength of the body being so much reduced, as to be incapable of raising the fever necessary to the expulsion by the pores; it then, by the usual sympathy subsisting between the skin and the intestines, falls upon the bowels and occasions a diarrhœa. In consequence of which, the fever and sweats being no longer absolutely necessary, are in a short time considerably diminished. But when a diarrhœa does not happen, they continue their violence to the fatal termination.

This appears to me a plain, simple, and natural manner of accounting for, and explaining the nature of, the pulmonary hectic fever, and subsequent diarrhœa; and I must have been very unfortunate in my reasoning and deductions, if I have not fully convinced the intelligent reader, that the absorption of purulent matter into the mass of blood, never does or can subsist, and is therefore no way concerned  
in

in occasioning and continuing those complaints. But that they are originally caused, and continued by the retention of that quantity of phlogiston and lymph in the habit, which by the diseased state of the lungs is prevented being expelled by the atmosphere in respiration; and which expulsion by the lungs is absolutely necessary to health <sup>10</sup>.

<sup>10</sup> “ The air in the lungs acquires a quantity of phlogiston from the blood, which discharge of phlogiston, “ is absolutely necessary to the continuation of animal “ life, and which in time renders the air incapable of “ absorbing any more, and consequently unfit for respiration.”

Priestley on Air, vol. 1.

C H A P. VI.

*Means commonly used in the cure of phthisis—bleeding—chalybeats—whether med. enter the blood—the cause of disease seldom if ever seated in the blood—balsams and gums—issues, caustics, and other drains—bark—practice at Bristol wells.*

**P**REVIOUS to offering any considerations on the cure of the pulmonary consumption, it will be necessary to take a cursory survey of the means that have been, and now are, most generally used for that purpose. The principal of which are bleeding, blisters, issues, caustics, and drains of every kind, bark and tonics, oils, balsams, and pectorals.

In no disease incident to the human body, has bleeding been so generally ordered, and so frequently repeated in a given time, as in that we are now treat-

K ing

ing of<sup>1</sup>; and I fear the observation has been but too much verified, “that more die by the lancet than the lance.”

<sup>1</sup> “ Super omnia verò, venæsectione, eâquâ fatis tempestivè, frequentèr, et copiosè adhibitâ, utut inacilens, et tabidus fuerit *Æger*.”

Morton Phthisiol. lib. 2. cap. 4. An. 1689.

“ Si nihil reliqua proficiunt, sanguis mittendus est; sed paulatim, quotidieque pluribus diebus, cum eo, ut cætera quoque eodem modo servantur.”

Celsus, lib. 3. cap. 22.

“ To bleed in small quantities repeatedly.”

Fothergill Med. Obs. & Inq. vol. 4. p. 300. An. 1770.

“ In pleuritide, peripneumonia, et hujusmodi inflammatoriis pulmonum morbis, si in sanguine è vena extracto non appareat in superficie crusta alba, quæ necessariò apparere debet, pessimum? Materies namque illa crustam efficiens in pulmone remanet, eumque infarcit; undè paulò post crescunt febris, inflammatio, spirandi difficultas, et reliqua symptomata; si verò in altera sanguinis missione incipiat apparere; bonum? Contra si in secunda nè quidem apparebit, abstinato statim à sanguinis missione, aliter interficiet ægrotantem, quia per repetitam tunc sanguinis missionem, sanguis spoliatur parte volatiliori, unde major eidem ad coagulationes viâ præbetur, ut mihi retulit pro humanitate sua Vir doctissimus Dom. Lancisus amicus noster.”

Baglivi Oper. Cap. de Pleuritide. An. 1704.

In

In the early period of the disease, when the cough is dry, hard, and frequent; with pain, forenefs, and ftitches in various parts of the thorax; the pulse hard, quick, and full; the breathing fhort, with pain and difficulty; bleeding is an appropriated remedy, and may be repeated according to the urgency of thefe fymptoms with great benefit and fafety. But performing this operation two or three times, or oftener in a week, as is frequently done, I am convinced answers no good purpofe; but, on the contrary, weakens the patient, deprives him of that ftrength he fo much wants in combatting the difeafe, and greatly accelerates the fatal period.

When the patient fpits up purulent matter; when the pulmonary heftic, with remiffions and morning fwets, is confirmed; when the flefh is wafing away, and the ftrength vifibly decaying; whatever may have been the appearance of the blood in a former operation, withhold



the lancet, or the patient's life will flow out at the orifice.

The celebrated Boerhaave, and other eminent authors, recommend bleeding to be repeated while the buffy crust is found upon the blood, considering that as a criterion of inflammation<sup>2</sup>; and this practice has been very generally followed, more especially by the lower order of the profession. No appearance can be more fallacious than the size upon the blood; for it frequently happens, when received into several cups, that one or two of them should have it, and the others not<sup>3</sup>. In  
pleurifies

<sup>2</sup> “ It is cured (Hæmoptoe) with a large bleeding every  
“ third day, repeated to four times, or till the inflam-  
“ matory crust has entirely disappeared.”

Boerhaave's Aph. 1200. An. 1735.

“ This dense buffy appearance of the blood, with a  
“ firm strong pulse, will warrant the drawing off blood,  
“ till the respiration at least becomes more free and easy.”

Huxham on Fevers, p. 180. An. 1757.

<sup>3</sup> “ Such blood (fizzy) is usually called inflammatory;  
“ yet it is notorious, that this color sometimes does not  
“ shew itself upon the first blood, which is taken away in  
“ the

pleurifies the blood will sometimes be free from size, and yet the complaint continue<sup>d</sup>. In pregnancy the blood is for the most part fizy, when no disease is present.

“ the most inflammatory distempers ; and, on the contrary, it has been found in other disorders, if the patient happen to have been bled, in which bleeding is generally condemned. Ballonius Ephem. l. ii. p. 126. affirms, that some of the soundest constitutions always shewed the most impure blood ; and that in others, whose viscera were in a very morbid state, the blood always appeared extremely good.”

Heberden Med. Transf. p. 499. An. 1772.

“ In quocunque morbi genere sanguinis missi et refrigerati superficies, pellis albæ, duræ, similitudinem induit, indolem inflammatione comitatam denunciat, et rarò sine repetitâ hujusmodi exinanitione sanatur iste æger ; cæterisque paribus, ex hâc solâ re cognoscatur aliquo modo inflammationis gradus.”

Cl. Wintringham. Com. § 62. An. 1782.

“ I have purposely noted in a great variety of instances, the color of the blood, which had been received into different vessels ; and have found, that it was seldom alike in them all ; and that by turns, the first, or second, or third, has totally differed from all the rest. The fizy surface most usually covers the cup of blood, which runs out first ; but I have known the first eight ounces of blood without it, while the last  
“ ounce,

present. And therefore it is far from being an incontestable proof of inflammation<sup>s</sup>.

In reading medical works, we perpetually meet with the terms visciditv, lentor, and glewishness, as applied to the blood whilst circulating, and remedies ordered to remove such causes of disease. But is there ever any such condition, any such state of the blood? Does it ever become preternaturally thick, so as not to circulate freely through the vessels? I think not, except in cases of poison, and the bites of venomous animals, and of these I know nothing from experience.

Contrary to the received opinion, in-

“ ounce, received into a different vessel, has had a thick  
“ fizy coat.” Hewson on the blood.

“ Many persons live free from complaints with fizy  
“ blood.”

Fothergill Med. Obs. & Inq. vol. 4. p. 301. An. 1770.

<sup>s</sup> “ Which, (size or buff) however, very frequently  
“ doth not appear till the second or third bleeding, tho’  
“ the symptoms may indicate a very high inflammation.”

Huxham on Perip. p. 179. An. 1757.

flammation

flammation is found to render the blood thinner, and particularly the coagulable lymph; by which means the red particles or colouring matter, are precipitated to the bottom of the vessel, and the lymph remaining above, jellies and constitutes what is termed size or buff; the density of which, will be in proportion to its previous thinness. It is supposed to be occasioned by the action of the vessels upon the blood.

The motion of the blood being accelerated in diseases, probably depends more upon the action of various stimuli, applied in different degrees to the coats of the vessels in which it circulates, by means of the nervous system, than upon any quality possessed by the particles of the blood. And although bleeding may in the beginning of diseases, relieve by lessening the quantity of the blood, yet its most common effect, I imagine, is to diminish the tone and action of the muscular fibre.

The transient relief experienced from repeated venesection in the advanced stage  
of

of the Phthisis Pulmonalis, proceeds from the emptying the vessels, and thereby relieving the difficulty of breathing; and as it reduces the general strength, the action of the vessels will be diminished, and the circulation for a time become slower.

As from the earliest ages to the present time, it has been so generally taught by authors and professors, that the seat of diseases was in the circulating blood; it might reasonably have been expected to be an easy matter to determine when, and in what manner that fluid was acted upon, and became acrid, putrid, or mixed with various humours. But as they are silent upon this important part of the science, and, instead of proving a position so essential to the practice of medicine, are always supposing the affirmative taken for granted: I fear in this, as in many other instances, they have founded their theory upon the sandy basis of general and undefined terms, to which no determined signification has been, or can be associated.

That



That the circulating blood is susceptible of various changes and alterations, we are fully convinced by examining its parts when out of the body, not only in a diseased, but also in a healthy state. From inanition, consumption, and other slow and lingering diseases, in which the body has suffered great evacuations, or has not been sufficiently nourished; we find it thinner, and the red particles in a less proportion, than when in health. From intemperance, ease, placidity of mind and luxury, it probably acquires a different property. These variations are the effect, not the cause of disease<sup>6</sup>. But that its consistence should ever become so dense and viscid as not to circulate through the vessels with the usual freedom, forming obstructions in the smaller vessels, and

<sup>6</sup> “ The blood in the small-pox, or in the hectic fever from an abscess in the lungs, or other parts, will be inflamed in proportion to the fever excited, but it will derive no particular complexion from the particular matter occasioning the fever.”

Millman on putrid diseases, p. 133. An. 1782.

thereby

thereby causing disease, notwithstanding the high authority by which the opinion is supported, I do not believe 7.

During inflammatory disorders, when this thickness and visciditv is supposed to take place, so far from not being able to circulate, the pulse is greatly quickened, and the animal heat augmented; and

7 “ In the blood it (spontaneous glew) produceth a  
 “ toughness and a paleness, making its circulation almost  
 “ impossible; in the vessels obstructions, concretions; a  
 “ pale urine, with scarce any smell; a slow spittle; a  
 “ white swelling; and the obstruction of the animal  
 “ secretions; a defect of the finest juices; from all which,  
 “ the smallest vessels do shut up and grow to a solid.”

Boerhaave's Aph. § 72.

If an healthy person was inoculated with the blood of a patient in the eruptive state of the small-pox, would the disease be communicated?

If an healthy person was inoculated with the blood of a patient in the confirmed lues venerea, would the disease be communicated? Were these experiments made repeatedly, with accuracy and fidelity, I think they would be decisive for the blood's being, or not being affected by disease. Many persons may have opportunities, without difficulty, of making the first; nothing but an eager desire of improvement, I fear will induce any one to make the last.

when

when blood is drawn, it is evidently thinned, though the relative proportion of *erassamentum* is not diminished; the coagulable lymph only is thinned, and precipitates the coloured particles as has been observed before.

In many diseases where the mass of the blood was supposed to be broken down and dissolved, become putrid and incapable of coagulating; as in the plague, sea scurvy, and after a long use of mercury; upon examination no such appearance has been discovered; on the contrary, the *erassamentum* was found as firm as in the greatest degree of inflammation<sup>8</sup>.

Ever since the publication of the microscopical observations made by Lieuwenhoeck, the red particles of the blood have been universally believed to be globular, that form being supposed better adapted than any other, for circulating through vessels of various diameters. But from

<sup>8</sup> Sydenham in the plague. An. 1675.

Lind on the scurvy. An. 1757. Ed. 2.

the accurate experiments of a late ingenious and eminent anatomist, we are induced to believe, that they are perfectly flat vesicles, containing a fixed central point, that they circulate in this form through the veins and arteries, that they do not become globular, but in consequence of putrefaction out of the body; and that this form is essential to life, he presumes from having observed it take place throughout the animal kingdom<sup>9</sup>.

In consequence of the opinion being adopted, that the blood underwent certain changes in its constituent parts, producing diseases, the application of medicines has been directed to that source. Hence we have seen formed the long catalogues of antiputrescents, antiscorbutics, antihectics, sweeteners, alteratives, &c. &c. But experiments have clearly convinced us, that the greatest part, if not all the medicines given to answer those in-

<sup>9</sup> Hewson on the blood.

tentions,



tentions, do not enter the circulating blood, and that, strictly speaking, there is no substance endowed with antiseptic power, when taken into the body.

On examining the blood of a person who had taken steel for some time, with a tincture of galls, it gave no signs of the metal being present: but upon mixing with it a small quantity of sal-martis, the serum became immediately black upon adding a few drops of the tincture <sup>10</sup>.

Cathartics and emetics act solely upon the stomach and bowels. All medicines of the bitter, astringent quality, and into whose composition any mineral substance enters, I believe exert their influence in the alimentary canal, when taken inwardly.

Mercury has been generally believed to

<sup>10</sup> Philos. Transf. vol. 50. Part 2. p. 595.

Dr. Friend (Emmenalog. c. xiv.) informs us, that no sooner had he injected two ounces of Decoct. Peruv. into the jugular of a dog, than it produced severe palpitations, convulsions, and death.

See A. Fothergill's Letter to Dr. Saunders.

pervade



pervade every part of the body; to break down the mass of blood, dissolve its globules, and render it incapable of coagulating, nay, to lodge in the very cells of the bones. Yet from some experiments I have made myself, and others that have been lately published<sup>11</sup>; I am inclined to believe

<sup>11</sup> The many experiments that have been made by an ingenious and accurate anatomist, upon blood in various states, on the saliva, and upon the urine of persons under the influence of mercury; in order to discover whether it was present in these fluids, seem to determine it in the negative. He observes, “ that the changes it “ (corrosive sublimate) afterwards undergoes in the body, *in becoming quicksilver*, is most probably produced “ in the *blood vessels*,” p. 144.—He afterwards says, “ I am inclined, however, upon the whole, rather to “ think with Mr. Hunter, that *the mercury* is in the *human fluids* in the form of a new salt; since gold, &c. “ were not amalgamated by these fluids, obtained in such “ a state as made them be presumed to be *fully saturated* “ (if one might say so) *with mercury*, p. 219.”—At last he concludes, “ In whatever state *mercury* exists in the “ *blood*, I am convinced that it always *exhales* from the “ *body*, after its action is over, in the form of *running mercury*; and that it may not only be *decomposed*, but “ *somehow acquire phlogiston in the human fluids*,” p. 223.

If

believe its action is principally, if not entirely confined to the lymphatic system; and that it seems to me very doubtful, if ever mercury in a natural state, circulates in the blood.

Hence it would appear, that notwithstanding the many discoveries which have lately been made in this part of physiology, we are far from being perfectly acquainted with the properties, and constituent parts of this vital fluid. In the blood is the life of man, and therefore nature

If I understand the author right, the mercury when introduced to the body in the form of a salt, is reduced to fluid quicksilver in *the blood vessels*; that, in order to produce its effects on disease, it is again changed into a new salt; and, last of all, in order to make its escape, after producing such effects, is changed a second time to *running mercury*. I must confess, I do not think such rapid changes and repeated transformation, are consistent with the usual simplicity of nature's operations. It is probable, (at least so is my opinion, in which perhaps I stand single) mercury acts solely upon the lymphatic system, without entering the blood vessels; where had it been in a fluid form, the experiments hinted at, would inevitably have discovered it.

See Cruikshanks's Letter on Absorption to P. Clare.

has

has wisely placed innumerable barriers to prevent extraneous matter, except what is proper for our nourishment, from entering it. And as it appears to be very little, if at all<sup>12</sup>, concerned in producing disease, it surely becomes the indispensable duty of every physician, no longer to confine himself in the trammels of fashion and custom, but to deviate from the beaten track of practice, and search for the seat of diseases, for the acrimony, putrefaction, and caustic acids, which we hear so much of, where they are probably to be found, in the stomach and intestines, in the viscera of the lower belly.

I by no means would be understood, that bleeding is never proper when purulent matter is expectorated from the

<sup>12</sup> “ The more we are acquainted with the animal  
 “ œconomy, the more reason we find to believe, that the  
 “ seat of diseases is not in the blood; with the sensible  
 “ qualities of which, it seems to have very little rela-  
 “ tion.”

Heberden Med. Transf. vol. 2. Queries. An. 1772.

Robinson on Consump. part 1. p. 111. An. 1727.

lungs;

lungs; many cases and circumstances will occur, in which it may be highly expedient; but in treating the subject in general (and it is impossible to particularise every variety in the symptoms) I wish to enter my caveat, and protest, as I do most fervently, against the frequent repetition of the operation as a means of cure. This I earnestly address to young physicians, and particularly to the lower order of practitioners.

I am very sensible how much, in this opinion, I differ from the most eminent in the profession; men not more distinguished for learning and knowledge, than for liberality and humanity. Characters such as these must command the esteem of every one; but were we implicitly to follow authorities, even of the highest reputation, all improvement would be precluded, and the science, like the arts in China, remain for ever at the same point of imperfection <sup>13</sup>.

Bleeding

<sup>13</sup> “ Authority ! thou father of all errors, thou en-  
L “ slaver



Bleeding in this and many other diseases, is certainly a most effectual and valuable remedy; but in this great city, I speak from experience, it is used too indiscriminately, without rationale, but as a matter of excuse, and to do something; where complaints of the true inflammatory kind very seldom occur<sup>14</sup>.

The

“flaver of the mind, that hood-winkest the understanding, and keepest all arts and sciences, that should benefit mankind in perpetual darkness and obscurity.”

Robinson on Consumption, part 2. p. 128. An. 1727.

<sup>14</sup> “But without the least pretence to bleed for pains not at all inflammatory; where, except in case of a *plethora*, or sometimes of violent spasms; bleeding at the best never does any good; much mischief has been done by the injudicious, undistinguished use of this evacuation; which is never neutral or indifferent; but where it does no good, can hardly ever fail to do mischief. The first thing that is commonly done in a fever, is to let blood.—If the patient is nothing better next day, if even worse perhaps for his loss of blood the day before, the bleeding is repeated—because it is a fever. And it is the most common of all fatal blunders, that in fevers, before the physician is called, the patient has been reduced by frequent bleeding to a state of languor and weakness, from which it is impossible  
“for



The loss of blood, above every other evacuation, reduces the patient's strength; it relaxes the muscular fibre, and diminishes the vital principle, in proportion to the quantity drawn, and frequency of the operation. It should, therefore, be undertaken with great caution, and not repeated without an evident necessity. Not because the blood appears of this or that quality, for its colour and consistence may depend upon causes totally distinct from the disease. Let them always retain in their minds, the admirable advice of

“ for all the power of physic to recover him. For it is  
 “ not every apothecary, no nor every doctor neither,  
 “ that knows when bleeding is proper, when not. The  
 “ fevers that have for many years prevailed the most in  
 “ this great town, are of the low lingering kind, which  
 “ hardly bear once bleeding. And though things of this  
 “ nature are by no means to be compared by the strict  
 “ rules of calculation, I am positive it is talking very  
 “ much within bounds to say, that many more English-  
 “ men die by the lancet at home, than by the sword  
 “ abroad.”

Armstrong's Med. Essays, p. 15. An. 1773.

L 2

Celsus :

Celsus: "Interest enim, non quæ ætas sit, "neque quid in corpore intus geratur, "sed quæ vires sint<sup>15</sup>."

Whenever the idea was formed of an ulcer in the lungs, it was very natural to imagine, that balsams and gums would have the same good effects internally taken, as they were supposed to have when applied to external sores. On this principle, from the earliest accounts, we have on record, balsams and pectoral medicines have been constantly given in great abundance, in all complaints affecting the lungs. That there is no sort of affinity between an external ulcer, and diseased lungs in which pus is secreted, must have appeared evident to every person who has had opportunities of inspecting the bodies of those who have fallen victims to Phthisis Pulmonalis. In the former part of this work we observed, that pus was not only secreted by vomicæ, but by the

<sup>15</sup> Celsus, lib. 2. chap. 10.

pressure of tubercles upon the parynchymatous substance, it was deprived of the vital principle, and also dissolved into pus, thereby wasting the substance of the lungs as the disease advanced; and when a cure happily takes place, the loss of substance is not renewed, as in an external ulcer, but the parts collapse, unite, and the extremities of the vessels close, the remaining part of the organ performing the office destined by nature to the whole. The cure therefore seems to take place, rather from the cause being removed, and a stop being put to the progress of the disease, than by the means nature makes use of in external ulcers, where there is a renovation of flesh and skin, and by means of a firm cicatrix, the part is restored to nearly the same state as before the injury. The discharge of matter and loss of substance, are the only circumstance in which they agree; and we may add, that balsams are equally ineffectual in both.

In some authors, and those of great eminence, the class of pectorals, demulcents,

cents, attenuants, incrassants, &c. is so extensive, that they seem to have copied the whole *materia medica*, rather than selected a few remedies for a particular disease. The good effects of these are spoken of with such confidence, that the only difficulty seems what to take; and it is not incurious to observe, with what little variation those have been handed down during the two last centuries. The similarity between the old and the present practice, is a melancholy proof, how very little the profession has actually been improved during that period. By perusing some instances in the notes, the reader probably will be of this opinion<sup>16</sup>.

That

<sup>16</sup> The following prescriptions are copied from the Sloan collection of MSS. in the British Museum.

No. 1. From Arden's Medical Practice, he was a surgeon at Norwich. An. 1326.

R. " The roots of comfry, the roots of liquorice, " the juice of them both, the seeds of plantyne, and the " seeds of crepis, temper them finely, & f. a. make an " electuary, and use it."

No. 2.



That medicines of this kind are universally given in complaints of the breast,  
needs

No. 2. Ad Phthisin fumus quo Caratus fuit Mr. Norrile.

R. " Oliban. ʒi flor. sulph. ʒi incorpora cum ovi  
" vitello & extende super linteo ex utraque parte  
" siccetur ad ignem, secetur in frustula magnitudinis  
" solidi anglici, sumat ex tubo tabaci; *Mercatoriste*  
" Phthificus desperatus sæpius recurrente purulente  
" sputo hoc assumpto remedio iterato curatus fuit——  
" statim ab hausto fumi excitabatur tussicula & puru-  
" lenta materia in magna copia expuebatur."

A Norwich teste Doctore Calladon.

No. 3. MS. collection by J. Bewshine of Claverton in Com. Somerset. A. D. 1594.

R. " Three pints of running water, of Portugal  
" sugar ʒviij and nine figs, of anniseed bruised half a  
" spoonful of raisins of the sun washed and stoned Mi.  
" of maidenhair ʒi, let all these boil together, until one  
" half or more be wasted, strain it, and drink 2  
" spoonsful every morning, and you shall find present  
" remedy."

No. 4. For the chin cough in children.

R. " Three or four cloves of garlic, or more, peel,  
" bruise, and boile it in malmsy till it be very tender,  
" spread it upon scarlet, and lay it upon the breast,  
" nigh the throat, use it 3 days and nights, changing it  
" every day."

No. 5.



needs no proof; that they are ineffectual to the end proposed, must be obvious to every

No. 5. For the cough of the lungs.

R. "Of chosen manna ʒi of the lights of a fox  
" finely powdered, of cassia, and of horehound ana. ʒss  
" oil of sweet almonds ʒss, syr. of Ros. solutive q.s. f.  
" Elect. take ʒss two hours before meat, before supper,  
" and going to bed."

No. 6. Loch ad sputum sanguinis cum album ovi.

R. "Sanguinis draconis ʒij Amili Tragacanth. ana.  
" ʒi Sem. papav. portulacæ, uvarum ana. ʒi terræ  
" sigillatæ vel boli armeni, rosarum rubrarum ana. ʒss  
" fiat pulveris tenuiss. qui album. ovi crudo fortiter  
" agitate, ut sit tenuium partium excipiat, fumaturq.  
" eclegmati loco, cui saperis gratia saccharum rosatum  
" tabul. addatur."

From Theodore Turquet de Mayerne. A. D. 1603.

No. 7. Phthisis & Ulcus Pulmonum.

R. "Succi legrit. ʒij Styrax calamit ʒi Opij,  
" Croci, myrrhæ æ. ʒss f. pastilli fabræ magnitudinis."

No. 8. Exptm. ad tussim, quo matrona qdam in 369 diebq. curata fuit, quæ habuit sputum saniosum cum tussi.

R. "Rad. acori, Enul. camp. ana. ʒss Irid. ʒij  
" hord. excort. violarum ana. Mij Rub. tinctorum  
" ʒiij aristoloch. rot. ʒi Capil. vener. Miss ficuum  
" pinguium No. x. ligrit. ras. ʒss hyssopæ, sem. ur-  
" ticæ

every practitioner. And I am disposed, to believe, that they are not merely innocent, but that the indiscriminate use of oils, greasy emulsions, and linctus's frequently do much harm. The patient depending upon their supposed virtues, neglects more effectual means of relief. They relax and injure the tone of the stomach; and from their dispositions to become rancid and acrid, increase by their stimulus the complaint they were meant to relieve. It has been said, "that oily  
 " linctuses and anodyne medicines act,  
 " by supplying an artificial defence to the  
 " aspera-arteria, which is abraded, and  
 " deprived of its lubricating mucus, and  
 " thereby become exceeding sensible to  
 " cold air, or the acrimony and heat of  
 " the humors distilling from the glands<sup>17</sup>."

" ticæ æ. ʒij passul. Mss mel despumat. coch. iij Aq.  
 " lib. iijss f. Decoct. de quo bibat sæp. in die per  
 " calam."

<sup>17</sup> Barry, p. 218. An. 1727. Ed. 2.

Fuller on Med. Art, lohoch. An. 1740. Ed. 5.

This

This is the opinion commonly entertained, and at first view it will appear very plausible; but, upon nearer inspection, will be found without any foundation, when we enquire by what means these medicines are to be conveyed to the diseased parts. We know that the smallest particle of matter getting within the epiglottis, causes violent irritation and incessant coughing till it is removed; and it surely cannot be imagined they are to go the round of the circulation.

In catarrhal, tickling coughs, where a thin rheum falling continually upon the fauces and top of the larynx, irritate the parts, and excite frequent coughing, by which the natural mucus that covers them is washed off. In this case, soft oily medicines, so far as they tend to supply that mucus, and defend the surface of the parts from the action of the air, may be of service. The usual forms are oily emulsions, linctuses, mixtures with spermaceti, &c. but as these compositions in some measure constantly injure the stomach,

mach, I prefer a solution of gum arabic, or a mucilage of sem. cydon. with a sufficient quantity of an appropriated anodyne. These will be found to answer every purpose intended by oily med. without any of their offensive qualities. Further than this, I presume pectorals can do no real service in diseases of the lungs. Some transient relief may be imagined in their passage down the œsophagus into the stomach, by their coolness exciting a new stimulus to the tracheæ; but experience will soon convince us, that no permanent relief can arise from their use. They pass immediately into the stomach, where they mix with its contents; from thence into the intestines, and whether any part of them are taken up by the lacteals and carried into the blood, is a matter of some doubt; certainly not in that quantity, as to act in the nature of a healing balsam to the diseased lungs.

The idea of oily, and viscid fluids, cloathing and enveloping the particles of sharp and acrid matter in the stomach,  
and



and bowels, so as to prevent their irritating and vellicating the fibres, seems more imaginary than real; particularly in the stomach, where there is so frequently an ingress and egress, of solids and fluids: the small quantity of med. taken for that purpose, does not seem adequate by any means to produce the effect. For if the acrid or offending matter was in such a quantity, as to be enveloped by a few ounces of an oily emulsion or linctus, taken in the course of a day; it will not be sufficient to injure the health: if it is more, the readiest way is to evacuate it by an emetic or cathartic.

I have frequently experienced good effects from the use of squills in humoral asthmas and coughs, without inflammation; but as they are usually united with opium, great part of their effects must be attributed to its anodyne and antispasmodic quality: and their promoting expectoration proceeds from stimulating the stomach, and sometimes exciting vomiting.

The



The terebinthinate balsams and gums are liable to the same objection with the former; very few of their particles entering the blood, and being of a stimulating nature, are more apt to increase than alleviate the complaint. When any relief has been found from their use in asthmatic cases, it proceeds from their warmth conveying a gentle stimulus from the stomach to the lungs, and sometimes from their laxative quality.

The intelligent reader may imagine these observations useless and superabundant, at this improved state of the medical science; when hot balsams and turpentine are seldom given in diseases of the lungs, and never relied upon for a cure. But I have lately, more than once, seen patients with a considerable degree of inflammation on the breast, tightness, pain, cough, and difficulty of breathing, with a full and quick pulse, swallowing boluses of bals. Locatelli, and that not by their own or friend's advice. This is a composition of olive oil, wax, and turpentine, the  
last

last article in the proportion of one to four. Nothing but seeing the medicine, and receiving the account from the patients themselves, could have convinced me it was possible, notwithstanding my facility of belief in matters of this kind, that such a substance could at any time be taken medically, far less under such circumstances.

From these considerations, I am well convinced, that oily and balsamic medicines, so far from producing any permanent benefit in such complaints, do by their greasy, viscid quality, injure the powers of the stomach, impair digestion, and very frequently by their stimulating, heating quality, increase the inflammation and fever, thereby aggravating every alarming symptom.

Not only in Phthisis, but in many other chronic complaints, issues, caustics, setons, and perpetual blisters have been very generally used. It has been supposed, that nature always striving for her own preservation, has the power of expelling  
what

what is injurious through those artificial openings, as a critical abscess, or increased discharge by the natural passages, had sometimes removed diseases. It appeared therefore probable, that the matter discharged by their means, was the diseased and noxious particles of the blood; and that in time it would work itself pure, and health be restored. That an idea of this kind should strike people of common understanding, unacquainted with the principles of the animal œconomy, is very natural; but we are surpris'd to see men of learning, of high rank and experience in the profession, entertaining such a notion. “Further, while blisters evacuate  
 “ chiefly the serous humors, issues and  
 “ setons generally discharge true purulent  
 “ matter, and on this account, may be of  
 “ greatest service in internal ulcers <sup>18</sup>.”

Notwith-

<sup>18</sup> Whytt, remarkable effects of blisters, p. 70. 4to. Ed. An. 1768.

“ *Ulcera denique externa excitata perinde interdum*  
 “ *hecticæ febri finem imposuerunt, dum acre irritans hu-*  
 “ *morumque*

Notwithstanding the wonderful power of that principle called nature, in the human body; I doubt much, whether it is capable of expelling the diseased parts of the blood (if any such there are) by those artificial openings and retaining the sound.

The fact is, that wherever there is a wound with loss of substance; or what is precisely the same thing, where a wound is prevented healing by the intervention of an extraneous body; there will be a discharge of matter from the mouths of the divided vessels; and the quantity and quality will depend upon the degree of tone in the muscular fibre, and in some measure upon the situation of the wound. For I believe it will be granted, without bringing evidence in proof, that an issue

“*morumque corrumpens massam viam nactum est e*  
*corpore emigrandi. Hinc fonticuli ac setacea idoneis*  
*locis excitata dictum in finem maxime sunt proficua;*  
*et non pauca phthiaseos illis percurata exempla ostendit*  
*historia medica.”*

Wen. Trnka. Hist. feb. Hecticæ, p. 333. An. 1783.

in



in a sound, healthy person, will discharge as much, and as purulent matter, allowing for the difference in the muscular strength, as in a person labouring under a disease external or internal.

An author upon this subject, has recommended drains, which he emphatically says, "*may be felt.*" Issues made in the back by caustic, three inches in diameter, that when the eschar is digested, are capable of containing *fifty peas*. The greatest number of the consumptive patients being of the weak and timid sex, I fear such a remedy would be thought more formidable than the disease, were we confident of its producing beneficial effects. But this is a trifle, a scabite, to the practice of a late French physician of some eminence. He applies actual fire in the cure of diseases, and shelters himself under the sanction of the father of medicine. "*Quæ non sanant medicamenta, sanat ferrum; quæ non sanat ferrum, sanat ignis; quæ non sanantur igne, sunt insanabilia.*" As the work is lately published, and not

M

generally



generally known in this country, I have quoted the passage as a curiosity, and apprehend the reader will agree with me in thinking any thing further unnecessary<sup>19</sup>.

As far as my experience has gone in respect to drains of every kind, I have observed, that in proportion to the quantity of discharge, they tend to reduce the strength of the patient, and are always fore, painful, and disagreeable. I have never seen any of the magnitude just mentioned; but I should apprehend the pain occasioned in a delicate, irritable, diseased habit, by an ulcer of nine inches in cir-

<sup>19</sup> “ Le lait à la suite d’une couche, se porta à la matrice & à la poitrine; il y avoit fièvre lente, sueurs nocturnes, crachats purulents, douleurs au bas-ventre, au pli de la cuisse, & au genou. M. Pouteau applique deux cylindres (de coton) au milieu de la cuisse, pendant la brûlure, la poitrine fut débarrassée, les douleurs descendirent dans le bas-ventre, & tous les accidents furent victorieusement combattus & détruits, au moyen d’une longue suppuration.” By the same *essay* means he informs us almost every disease incident to the human body may be cured.

Journal de Medicine, &c. Paris, Juin 1783.

cumference,

cumference, full of hard peas, would of itself produce a very considerable degree of fever. On the whole, therefore, as a general remedy, I do not think myself warranted in recommending them in Phthisis Pulmonalis.

The regular remissions in the pulmonary hectic, and its general similarity to intermittent fevers, when added to the belief of its originating from the absorption of putrid matter, very naturally suggested the practice of giving the cortex peruvianus on a principle, of reasoning from its good effects in similar cases; and very often I believe it has been mistaken by superficial observers, for a true intermittent. But although this medicine has been exhibited in every stage of the disease, and in every form and quantity, by men of the first abilities and eminence, it is a melancholy truth, that there is not one instance well authenticated, of a consumption of the lungs being cured by it<sup>20</sup>.

How

<sup>20</sup> The reader may peruse a paper upon this subject, by the late Dr. Fothergill. Med. Obs. & Inq. vol. 5. An. 1776.

How many have fallen victims, and do daily, to the misapplication of this valuable drug, is happily no part of my task to enquire; for I believe experience will justify me in asserting, that in every case, in every stage of Phthisis, where it has been given, the symptoms have been aggravated, and the fatal period greatly accelerated.

Hætic is a term so undefined, and applied to so many fevers arising from causes totally different, that it is not to be wondered at, if the bark has cured some of them. As for instance, in large discharges from ulcers, from amputations, or from a long continuance of the fluor albus; the flesh and strength melt away, the pulse becomes quick, and a slow continued fever is the consequence: in such

“ Tot habent causas, easque multum diversas, febres  
 “ lentæ quæ *hæticæ* vulgo dicuntur; ut non idem mor-  
 “ bus, sed alius atque alius esse videantur.

Mead Monit. et Præcept. Med. p. 46. 1751.

See a paper by Dr. Heberden in Med. Transf. vol. 2.  
 An. 1772. and also chap. 3. of this work.

Galen. Method. Medendi. lib. 10.

cases,

cases, under proper restriction, the bark is an effectual medicine. But, as I mean to confine myself to the pulmonary hectic, I shall not take up the reader's time with common-place observations on other subjects.

Bark exerts its influence upon the stomach and first passages, and most probably does not enter into the blood. In augmenting the tone of the living muscular fibre, it will consequently increase the celerity of the pulse, as has always been experienced when given in the pulmonary hectic <sup>21</sup>.

I have entered so fully into the nature and cause of the pulmonary hectic in a former chapter, that I flatter myself I have convinced the reader, how perfectly free and distinct it is from every symptom of putrefaction; and my opinion upon this subject will receive additional strength, by considering the effects of the same medicines in each of the fevers.

In fevers termed putrid, the leading

<sup>21</sup> Cullen first lines. § 920. Ed. 4. An. 1784.

characters of which are a relaxation of the muscular fibre, and a diminution of animal strength, the remedies found most effectual are bark, snake-root, camphor, volatiles, cordials, and others of the antiseptic class, together with a liberal use of Port wine. Let these medicines separately or conjointly be given in the pulmonary hectic, and what will be the consequence? The fever and thirst will be greatly increased with pain, tightness on the breast, and difficulty of breathing, the fever will become continued, attended with slight delirium; perhaps nature may make an effort, and relieve the constitution by the bowels; the diarrhœa will come on before its usual period, and the patient be hurried to his grave. This picture is not drawn from fancy; I have seen repeated instances of this kind in my attendance upon the sick, and the same may be seen every day, for the practice, though I hope diminished, is by no means relinquished.

Perhaps there is not in England, any  
spot



spot where so many phthifical patients are collected together as at Bristol wells <sup>22</sup>, from the reputation those waters have long had, of being efficacious in such complaints. In proportion to the opportunities of seeing the disease, it is presumable, the method of treating it would be improved, and those medicines that have been found ineffectual, discarded, and somewhat else substituted. But he who reasons thus, does not recollect, that when once a mode of practice is generally adopted, it continues with the practitioner for life: at the hot wells, bark and animal food are regularly prescribed in the confirmed Phthisis. Since the first impression of this Essay, several patients have applied to me who had been there treated in that manner; and, as might be expected, grew worse and worse, till wearied out at length, they crawled away,

<sup>22</sup> The town of Bristol was formerly remarkable for the number of its consumptive inhabitants.

Vide Christophori Benedicti Theat. Tabid.

that

that they might die among their friends, and be buried in their own country.

## C H A P. VII.

*Phthisis why difficult of cure—intentions of cure—bleeding—aperients—anodynes—purgatives—emetics of different kinds—blisters—setons—hydrargyrus—in what the lungs differ from other parts of the body—wounds—effects of vomiting.*

I Hope the reader will pardon me for dwelling so long on the subject of the last chapter, as it appeared essentially necessary to the design of the work, before a method of cure should be proposed, to examine on what grounds those medicines which have been for ages in the possession of the physician, and familiar to the patient's mind, were excluded. And though this to the learned and experienced, may appear unnecessary, yet, as it is possible these  
pages

pages may fall into the hands of those who are just beginning their medical career; it will be matter of great importance, to guard their minds against the impression that may be made by the pompous recommendation of pectorals and balsamics; and also to caution them against the general and indiscriminate use of such medicines. For I know not which is most difficult; to eradicate prejudices early imbibed, or to introduce a mode of practice that is opposite to, and different from, that in common use.

Authors, ancient and modern, who have written upon consumption of the lungs generally agree, that it admits with difficulty of a cure even when recent, but in the advanced stage, for the most part it terminates fatally<sup>1</sup>. This is a melancholy truth, too evident to be denied; every day's experience evinces how little the  
disease

<sup>1</sup> " When once a single point of the lungs is obstructed, or the smallest ulcer formed, the disease becomes alike formidable, the age and habit of the patient,

disease is under the power of medicine. But although consumptive patients very generally fall victims, yet I can see no reason that the disease must be of necessity, and in its own nature incurable; and I am disposed to believe, that this opinion of its fatality, being handed down from such respectable authority, and so generally adopted, has weakened the efforts of the physician, and, instead of varying the treatment, and attacking the disease in its strong hold, he contents himself with

“tient, and the degree of inflammation or ulceration  
“being the same, whatever may be the cause.”

Fothergill on Consump. Med. Obs. vol. 4. p. 243.

An. 1772.

I cannot agree with this very respectable physician. It is well known, and I meet frequently with cases of incipient Phthisis, where the hectic fever being completely established, there cannot be a doubt of the existence of tubercles, that readily yield to proper treatment. The eminent author supposes obstructions to be formed in the smaller blood vessels, and increased by the momentum of that fluid. This is the old hypothesis of inflam. which is not supported by experience. Blood obstructed in vessels, and not admitted to the air, does not become pus.

the

the use of palliatives, and 'consigns his patient to country air, butter-milk, and boiled apples<sup>2</sup>.

In the works of surgical writers, we meet with instances of wounds in the lungs being cured with as little difficulty as those of any other viscus; and we have absolute proof from dissection, of Phthisis being cured in its advanced stage, when one entire lobe of the lungs, and that the largest had been consumed by the disease<sup>3</sup>.

In authors we find frequent instances mentioned of consumption, in every stage and degree, being cured by various and different means<sup>4</sup>. How far implicit faith is

<sup>2</sup> Cullen first lines, Phthisis. Pulm. vol. 2. Ed. 4. An 1784.

<sup>3</sup> Mudge in his treatise on the Catarrh, mentions a man who died in St. Thomas's hospital, after having perfectly recovered from a consumption of the lungs, for which he was in the house formerly. The body was opened, and only one lobe of the lungs was found remaining, the right having been entirely dissolved and expectorated.

<sup>4</sup> " Vidi enim, cum materiæ purulentæ usque adeo  
" graveolentis et fœtidæ, ut adstantes cubiculum ferre  
" non possent, libra una aut altera, admisto sanguine,  
" tussi



is to be given to those relations, must be left to the reader's determination.

Complaints in the breast, when taken in time, are easily removed; but their frequency in this variable climate, renders them so familiar to the inhabitants, that they seldom think of seeking advice, before the disorder has made a considerable progress. The number of infallible remedies stored up in every family, also tends to preclude the physician; and when he is called, it is inconceivable with what difficulty he gets his directions com-

“ tussi rejiceretur; et tamen lacteæ diætæ et balsami-  
 “ corum usu, interpositis pro re nata anodynis, in inte-  
 “ gram sanitatem æger restitutus est.”

Mead Monet. et Præcep. Med. p. 53. An. 1751.

A hectic fever with purulent spitting cured.

P. Forest, l. 4. Obs. 4.

A hectic fever with night sweats and copious expecto-  
 rations cured.

Hoffman Med. rat. Obs. 10.

In the Westminster Dispensary (we are told) that out of 212 cases of consumption 138 were cured, which is nearly two-thirds.

Millar Obs. on the management of prevailing dis-  
 eases, &c. 1783.

plied

plied with in any degree. Those who can labour incessantly to acquire wealth and honors, can scarcely be persuaded to give themselves any trouble in regaining their health, the greatest of all blessings; and without which, all others become as nothing. On the other hand, pleasure and dissipation, the employment of the many, raise powerful barriers against medical restriction. When people are slightly indisposed, and able to go abroad, they are not easily persuaded to forego what they esteem a present good, in order to avoid a distant, and what they wish to believe, an uncertain evil.

These are among the causes that render pulmonary consumptions so difficult to be cured, and not the nature of the disease; which, from experience, I am warranted to say, is curable at any period :

“ Atque hinc fit, quòd Phthisis vulgò tam malè  
 “ audiat, ac si esset morbus naturâ suâ prorsus incurabi-  
 “ lis, quum (quantum ego longâ experienciâ edoctus scio)  
 “ æquè certam curationem, atque alii morbi admittat,  
 “ modo debitâ methodo, satîs tempestivè tractetur.”

Morton Phthisiologia, p. 171. An. 1689.

before

before the vital strength is greatly broken down, and the stomach and digestive faculties rendered incapable of assimilating nourishment<sup>6</sup>. There have even been instances of recovery after the diarrhœa has been confirmed; and if we reflect on the wonderful powers of nature, in ré-

<sup>6</sup> That digestion is not performed by trituration, by fermentation, or by putrefaction, but by the gastric fluid acting as a solvent, I believe is now the general opinion. But for this purpose it appears necessary, that the body should retain a certain degree of health; or, in other words, that the disease should not be continual, as in that case the body would not be nourished. If we may be allowed to reason from analogy, this idea has been placed in a clear point of view by the learned and indefatigable Abbe Spalanzani: he found, upon introducing food into the stomach of animals not in health, that the gastric fluid did not dissolve it; whereas in the same species when healthy, the same kind of food was readily dissolved. Food not dissolved remains to putrify, and thereby adds to the disease. Admitting this reasoning, which appears consonant to every day's experience, it strongly points out the folly, absurdity, and fatal consequence of pressing animal food upon the sick, so universally the custom in this country.

See Dissert. on the Nat. Hist. of Animals, &c. vol. 1.

§ 152. A. D. 1784.

moving

moving the cause, and obviating the effects of disease, it will be difficult, and perhaps imprudent, for a physician to determine what is incurable. Formerly, it was the fashion in desperate cases, when the usual means failed of producing the expected effect, for the doctor to quit the field, and after pronouncing a formal sentence, abandon the patient to what he supposed inevitable death. But as it often happened, that nature triumphed over the disease, and the sick unexpectedly recovered; the present practice, actuated by better judgment, certainly by more humanity, consider a recovery always possible whilst life remains; and even if their endeavours should be apparently and obviously ineffectual, it is great consolation to the distressed, to see every possible means used for their relief; at least, it is a ground for hope, their last and only comfort.

In Phthisis Pulmonalis, the intention of cure is, to obviate the occasional causes of fever, that may be lodged in the stomach  
and



and first passages ; to remove obstructions in the hypochondriac viscera ; to evacuate the purulent matter from the lungs by the speediest possible means ; to appease the cough, and to give rest to the tender inflamed lungs ; to regulate air, exercise, diet, and the passions of the mind.

The recent effects of cold are so well understood, and may be so easily removed by the common means of bleeding, diluting drinks, abstinence and the usual antiphlogistic plan ; that any directions to that purpose would to the medical reader be perfectly unnecessary.

When from a bad habit of body or neglect, the cough remains obstinate, dry and sonorous ; with pain in the breast, stitches in different parts of the thorax, increased upon coughing, and attended by a considerable degree of heat and fever ; I would recommend bleeding in a moderate quantity, and to be repeated at proper intervals, till those symptoms abate, if there is nothing in the pulse or strength to forbid it : in this period of the  
disease



disease the patient usually bears the repetition of the operation without any bad consequence. The body is to be kept open with gentle saline purgatives, drinking frequently of barley water or linseed tea; and if the cough prevents rest, a proper dose of an opiate at bed-time will have a good effect. Since the first impression of this work, I have sometimes found the Elix. Pareg. which I there recommended, heat the patient, and increase the fever; I therefore generally use the Syr. Emecon. or if that is not sufficient the T. Thebaic. and these in such quantity, as shall certainly produce the effect desired.

In the beginning of all diseases attended with fever, it is essentially necessary that the intestines should be perfectly cleaned from the quantity of digested matter and fæces, which in health they always contain. Common purges will not be sufficient; I have frequently known patients have many copious stools daily, for many days together, and yet on giving

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a dose

a dose of Merc. Dulc. and Rhab. a quantity of hard fœces, highly putrid and offensive, has been discharged, to the great abatement of the disease. I therefore always wish to give this medicine where it can be complied with, and if properly dosed, it will be found to operate without ruffling or disturbing the constitution<sup>6</sup>. After these general evacuations, the remedy which I have found most effectual in every kind of cough, and in every period of Phthisis, is such a quantity of the Pulv. Ipecac. as will excite vomiting once or twice; and this I repeat morning and evening, as the strength of the patient, and the violence of the complaint may indicate<sup>7</sup>. This medicine the patient can

<sup>6</sup> See Lyson's Practical Essays, p. 70. An. 1783. Ed. 2.

<sup>7</sup> “ Vomitoria lenia debitis intervallis repetita, (præsertim verò si cum *εὐφορίᾳ* ferantur, neque nimis serò exhibeantur) multùm ad hujus phthificos curationem promovendam conferunt; utpote cerebrum et genus nervosum deoppilantia, et Rheumaticos dolores minorantia rigiditatem et stuporem febrosi generis universaliter sublevando; quo fit ut causa procatarctica, seu fomes hujusce Phthiseos, plurimùm subtrahatur.”

Morton Phthisis. p. 313. An. 1689.

take without fatigue, or impairing the strength; but I cannot approve of the emetics usually given, which operate eight or ten times, distressing the sick, and very often in delicate habits, producing disagreeable consequences.

The sympathy, subsisting between the stomach and other parts of the body, is so universal, as to have inclined the ancients to imagine the soul seated in that organ. Upon the state and condition of the stomach depends our health, spirits, nourishment, and the very existence of our frame; its influence extends to the remotest part of the body. But as this matter will be treated of in the appendix, I shall not enlarge upon it here.

The lungs, from their contiguity, will necessarily be affected in a peculiar manner, by whatever is received into the stomach<sup>8</sup>. If the stomach is loaded with a  
large

<sup>8</sup> “ Cui ut in illo casu non refragemur, nec in aliis  
“ fortasse in quibus multo prius ab exteriori illa causa  
“ læsiones ventriculi quam pulmonum, animadvertantur

large quantity of food, during the process of digestion, the air contained in it being set at liberty and rarified, that organ will be distended, and by pressing the diaphragm upwards, the cavity of the thorax will be diminished, consequently the lungs confined in a smaller space than usual, will be incapable of being expanded by the inspiration of the air; and thereby the motion of the blood through the pulmonary artery and vein impeded. If the lungs are diseased, the cough will be greatly aggravated; hence asthmatic people find their difficulty of breathing increased after meals, and during digestion. Should the quality of the food be acrid, acid, stimulating, or furnishing a quantity of rarified air, the nerves of the stomach will be disagreeably affected; that affection

“ unde malè ciborum confectio viscidos, acresve succos  
 “ paret, qui et stomachum vellicando, tussim excitent, et  
 “ in pulmonibus tandem subsistendo, irritandoque, cau-  
 “ sam præbeant phthisis.”

Morgagni de sed. & caus. Morb. L. 2. Ep. 22.

Art 20. An. 1761.

will



will by sympathy be conveyed to the nerves of the neighbouring parts: and when any part of the body is in an inflamed state, the nerves of that part acquire an increased degree of sensibility and irritability; therefore the lungs, when inflamed, will be sensibly affected by the quality or quantity of the matter contained in the stomach. And I am disposed to believe, that whenever any of the hypochondriac viscera are in a diseased state, be it more or less; the lungs when inflamed will be affected by them. And even when the lungs have been perfectly sound, acrid matter, or worms in the stomach and bowels, have occasioned, and continued an obstinate cough<sup>9</sup>. In such cases, will the

“ Si verò Ventriculus nutrimenti primaria officina  
 “ crudâ aut pituitosâ congerie laboraverit, unde haud  
 “ rarò compatitur pectus, secundo quoque die lente elua-  
 “ tur oxymelite, aut melle scilit. syrupo de peto querci-  
 “ tani, (vel unica at mediocri dosi vini benedicti) ex sero  
 “ lact. cerevisiati, aut decocto pectorali tepente propi-  
 “ natis.”

Chr. Benedicti Theat. Tabid. p. 156. An. 1656.

“ Tabes



the greatest advocate for balsamics and pectorals say, that the cure could be affected without evacuations appropriated to the cause?

As it is of general notoriety, and within the sphere of every persons observation, that we are easily, quickly, I may say, instantaneously acted upon by taking opiates, cordials, and poisons <sup>10</sup> into the stomach, from the action of their particles upon the nerves and lymphatic vessels, and by sympathy upon the whole system; is it not also reasonable and just to conclude, that different parts of the body will also by sympathy be affected, when offending matter is irritating the nerves of the stomach? For surely no person will say, that cordials, opiates, and poisons produce their effects by their being absorbed by the lacteals, and entering the circulation!

“ *Tabes ab abcessu ventriculi sese monstrat foetidis  
“ eructationibus, tussi sine expectoratione.*”

Home princip. Med. p. 138. An. 1762.

<sup>10</sup> Laurel water sometimes destroys life the instant it reaches the stomach. The bite of the rattle-snake in any part of the body kills in a few minutes.

Opiates

Opiates received into the stomach quiet a cough, not only from their general effects upon the nervous system, but from the particular sympathy subsisting between the lungs and the stomach: in the same manner coughs are excited by different matter acting upon the stomach, and by sympathy upon the lungs.

In the tussis convulsiva, or chin-cough, it is well known, what sensible relief is produced by repeated vomiting; and, indeed, there is no other medicine that can be depended upon in relieving that distressing complaint<sup>11</sup>.

By administering emetics in the manner here recommended, not only the contents of the stomach are evacuated, accumulation of viscid phlegm, and acrid bi-

<sup>11</sup> “ But in most cases, and in every stage of the disease, I have chiefly trusted to this process; (vomiting with tart. emetic daily) seldom having occasion either to bleed, or to use any other kind of evacuation, unless to procure a stool or two daily, if the medicine above mentioned fails in this respect.”

Fothergill on the Chin-cough, Med. Obs. vol. 3.

An. 1769.

lions

lious matter prevented, but the lungs being compressed during the action of vomiting, whatever mucus or purulent matter are in the ramifications of the bronchiæ and air vesicles, in tubercles or vomicæ, will be squeezed out and discharged; by which means an infinity of laborious coughing will be prevented; the patient feels greatly relieved, and the tender lungs remain at rest, till a fresh accumulation of matter is formed, and that will require some time.

Whoever considers the effects of vomiting, as being confined merely to evacuating the contents of the stomach, must, indeed, have considered them very superficially <sup>12</sup>. By the universal concussion and agitation they occasion, obstructions in the liver, biliary vessels, and chylopoetic

<sup>12</sup> “ For the great efficacy of vomits lies in the throws  
 “ and spasms on the muscles of the abdomen, by which  
 “ the obstructions in all the glands are forced open, the  
 “ size in the juices is broken and divided, and the per-  
 “ spiration rendered pervious.”

Cheyne Dis. body and mind, p. 247. An. 1742.

organs are attenuated and removed<sup>13</sup>: and in all complaints arising from those causes, it is the most powerful and certain alterative, that can be found in the whole *materia medica*.

Custom has such a powerful influence upon the human mind, that it is extremely difficult to act in opposition to it. From the effect of fear on the weak and timid, from pride and prejudice in those who are better informed, innovations in medical practice, meet with inconceivable difficulties. The practice I am recommending, stands in this predicament; but time, which is equal to power, by convincing people of its efficacy, and making it familiar to their imaginations, I have no doubt will remove every opposition. *Magna est veritas et prevalebit*.

Patients at first, are apt to be alarmed at the novelty of the practice; fearing that by taking pukes every day, the tone of their stomachs will be injured, and

<sup>13</sup> Huxham on Fevers, p. 229. An. 1757.



such ideas never want support from the ignorant and interested; but I can safely affirm, and I am warranted to do so by the best of all tests, experience, that I never saw any bad effects from a course of this kind continued for several months, with proper precautions: on the contrary, I have scarcely met with one instance, where the general health was not materially improved. For the satisfaction of the reader, I shall in the appendix adduce further authorities for this practice.

A critic upon the first impression of this Essay, (whose opinion delivered with liberality and candour, deserves every respectful attention) thinks the Tartar Emetic preferable to the Ipecacuanha in Pulmonary complaints<sup>14</sup>.

The Tartar Emetic from different shops, whether from the manner of preparing it, or the time it has been kept, differ much in its degree of operation. This uncertainty in its effects is often very distressing

<sup>14</sup> Critical Review for January 1783.



to the patient, and renders its use much less general than it would otherwise be. It acts in the same person with different degrees of violence, even when the intervals have been short. It soon grows familiar to the stomach, sometimes requiring the dose to be increased after once taking. Whenever it does not vomit, it certainly purges, and that with a considerable degree of force. This in Phthisis is anxiously to be guarded against, not only because of the weakness it occasions, and which is very material, but because when once a purging has been produced, whatever may have been the cause, it is very difficult to restrain it. In some constitutions I have found that no quantity, that could be given with safety, would occasion vomiting, but exerted its whole influence upon the bowels. The Ipecacuanha may be given in large doses with safety, and it will to a certainty produce vomiting; when it fails from being under-dosed, though it will purge, it is infinitely more gentle and free from griping than

than the Tart. Emet. The dose of Ipecac. like every other med. continued for a length of time, requires to be increased, but with a little practice, this may be done, and the operation regulated with great exactness. In order to decrease the volume of the medicine, which in time becomes disagreeable, I have sometimes added a small proportion of the Tart. Emet. but I cannot say it is an improvement.

For these reasons I prefer the Ipecac. to every kind of antimonial preparation, because it acts with greater ease and certainty. I usually begin with a small and under-dose, according to the age and circumstances attending the patient, and gradually increase it as I find occasion.

An ingenious author upon this disease<sup>15</sup>, has recommended the Vitr. Roman. because it acts quickly. This is a good reason for the ease of the patient, which I own at all times ought to be consulted; but I am inclined to believe, the emetic

<sup>15</sup> Symons on Consumption, An. 1780.

will have the most permanent good effects, when it remains sometime in the stomach, fifteen or twenty minutes, before it operates. I have not had any experience of this med. being always deterred by the violence of its action. I was lately consulted by a young man in the last stage of the disease, who had been for twelve-months taking medicines (without any advice) that were recommended by such authors as he could procure. After taking great quantities of bark, he took the Vit. Roman. and increased the dose to twenty grains. It operated most violently, yet he thought himself always cooler and stronger after it.

In the very beginning of the complaint, when, indeed, the physician is seldom consulted, if there is any suspicion of a retention of bile, a small dose of the Tart. Emet. will have a good effect; for, from what cause I know not, it evacuates bile better than the Ipecac. During the operation of these gentle emetics, unless the patient strain much, it is not necessary  
any

any thing should be drank; and as the intention is only to excite vomiting once, or twice at most, even when much reduced, they do not find themselves fatigued by it. However violent and unnatural the action of vomiting may seem, and really sometimes is; it is well known not to weaken the patient, and reduce the strength near so much as a common purge, even when the vomit is taken in the usual method <sup>16</sup>.

This medicine I continue through every stage of the disease, regulating the repetition, according to the strength of the patient, urgency of the symptoms, and as other circumstances may indicate. In the morning it is best taken fasting, and if the patient is weak in bed; but they should not fall asleep after it, as that sometimes prevents its action on the stomach. It is seldom necessary to repeat it in the evening; when it is, care should be taken that the operation may be finished before the usual

<sup>16</sup> Cheyne Disc. body and mind, p. 150. An. 1742.



hour of going to bed. It may not be improper to observe here, that as patients usually think medicines less offensive in the form of pills, than in any other; if the Ipecac. is given this way, they should be made fresh the same day they are to be taken; otherwise they become so hard, as to require a long time in dissolving, and therefore sometimes pass whole, or act solely upon the intestines, to the disappointment of the patient, and embarrassment of the physician.

In the early period of Phthisis, when the fever and heat are considerable, small doses of nitre, or the common saline mixture of reverius, in larger quantities than is usually given, cools the habit, and has a tendency to keep the body open, which should be carefully attended to. One motion at least should be procured every day; for which purpose, a proper quantity of Sal. Polychr. & Rhubarb may be taken at bed-time, or in the evening: I have found this composition a useful medicine in these cases, though by no means deserving



deserving the high encomiums that have been lavishly bestowed upon it. Should this powder disagree with the stomach, as it does sometimes, a morsel of the Elect. Lenitiv. will answer the purpose equally well.

When by these means the fever and heat are considerably abated, and before purulent matter appears in the spitting; I have sometimes used the hydrargyros in small doses, with singular advantage, particularly where I suspected the liver to be affected; but the cases having been few, and it requiring great precaution, the judicious physician must determine from the symptoms and other circumstances, the quantity and mode of giving it. For I should be very cautious in recommending any medicine here, that I was not warranted to do from the fullest conviction of its propriety, and that conviction can only arise from long experience.

If the cough is so violent as to prevent sleep, a dose of the Syr. Emecon. or Tinct. Thebaic. should be taken early in the evening,

evening, going to bed, and repeated in the middle of the night if requisite; it being essentially necessary to keep the lungs as quiet as possible; the agitation of coughing not only fatigues the patient, but increases the inflammation, and hastens the solution of the tubercles. But these will be most effectually prevented by the repeated vomits, which I have rarely seen fail; for in a few minutes, that quantity of matter, or mucus, will be discharged from the lungs, which would require many hours to bring up by coughing. And even the constitutional annual coughs, that old people are subject to in the winter, very frequently yield to this method of treatment in a short time<sup>17</sup>.

When

<sup>17</sup> “ A woman about thirty, in the winter of 1762, after a very severe lying-in, being much weakened, and having a cough along with a difficulty of breathing, which often approached to suffocation, was for some time treated with other medicines, upon a supposition of her being unequal to the fatigue of repeated emetics. But making no progress with castor, or gum ammoniac, or squills, I at last ventured to prescribe

O

“ half

When there is a fixed pain in the breast or sides, increased by coughing; that is not relieved by bleeding and the antiphlogistic med. usually given, I have seen good effects from a small blister applied upon the part, and repeated as soon as the skin is healed. This method answers better than using the blistering ointment, which always occasions great pain and soreness, and seldom produces a copious discharge. Instead of bleeding at the arm in those local pains, leeches applied, will sometimes relieve without weakening the habit, which bleeding never fails to do.

If there is any suspicion of matter being collected in the cavity of the thorax, and the symptoms are either not so clear and determined as to warrant the operation for the Empyema; or if they are, the fears

“ half a scruple of Ipecac. every other morning. She  
“ bore very well the fatigue of this method; and after  
“ continuing in it between a fortnight and three weeks,  
“ was perfectly cured of her asthma and cough.”

Aiken-side Med. Transf. vol. 1. An. 1772.

of

of the patient will not allow it to be performed, a Seton made as near as possible to the part affected, will often be found to produce considerable relief.

We sometimes meet with a violent cough, occasioned and kept up by causes totally distinct and separate from the lungs, and in which they are no ways concerned. Infarctions of the liver<sup>18</sup>, worms in the stomach and intestines, and offensive matter in the stomach have been known to produce this effect. In the low fever, that is called nervous, a troublesome cough is a very common symptom, but only in an erect posture. In such cases I need not observe, how ineffectual the usual treatment would prove.

The lungs differ from every other part of the body in many respects, but particularly in the following. Their substance is more vascular, and a greater quantity of blood passes through them in a given time. The aspera-arteria minutely ramifying

<sup>18</sup> Cloffy Obs. An. 1763.



through every part of their substance, terminating in air vesicles, is peculiar to them. And by respiration they are kept in perpetual motion. These differences subsist throughout life, in sickness and in health.

When the lungs are diseased, their motion is not only increased by respiration being more frequent; but they suffer for the most part, violent concussions by means of coughing. This circumstance attending no other viscus, renders such disorders more difficult to cure; for all authors agree in this, that rest is absolutely necessary to parts when inflamed.

If by any means the cough could be prevented, I presume diseases of the lungs would be nearly in the same state, and admit of a cure as readily, as those of any other internal part, equally inflamed. I say nearly, because they would still be subject to increased motion by the frequency of respiration; but this does not appear to me of great importance, because it is both natural and familiar, taking  
place



place upon any exercise or quick motion of the body.

Wounds in the lungs by a small sword, or pistol bullet, if the larger vessels are missed, we find admit readily of a cure. But in such cases, there is no obstruction in the exhalent vessels, no mucus or pus secreted into the bronchiæ to excite a cough, and consequently no hectic fever; therefore the wound heals up readily, as it would do in any other viscus, by divided parts colapsing and uniting, probably by the first intention. It is the external air that causes digestion in wounds without loss of substance, which heal up much sooner, and more easily when it is excluded <sup>19</sup>.

When

<sup>19</sup> “ It has been commonly supposed, that an hemoptysis was naturally, and almost necessarily, followed by  
 “ an ulcer of the lungs : but I will presume to say, that,  
 “ in general, this is a mistake ; for there have been many  
 “ instances of hemoptysis occasioned by external violence,  
 “ without being followed by any ulcer of the lungs ; and  
 “ there have also been many instances of hemoptysis  
 “ from an external cause, without any consequent ulceration.

When the cough in consumptive cases, has continued any length of time ; it either proceeds from affection of the alimentary canal and hypochondriac viscera, acting by sympathy upon the lungs ; or from mucus and purulent matter secreted into the air vesicles, and branches of the aspera-arteria, by irritation exciting incessant coughing till it is discharged. The consequence of this reiterated concussion is, that the disposition is continued in the exhalent vessels of secreting viscid lymph or purulent matter ; by which the larger tubercles are dissolved, and new ones formed : and also by the general pressure, the parynchematous substance is condensed and rendered capable of being melted into pus.

The exciting cause in the first passages, may with certainty be removed ; and those

“ ration. And this too has been the case, not only when  
 “ the hemoptysis happened to young persons, and recur-  
 “ red for several times, but when it has often recurred  
 “ during the course of a long life.”

Cullen first lines, § 864. Ed. 4. An. 1784.

in

in the lungs greatly, if not entirely obviated by the frequent use of gentle emetics, given in the manner directed. And when the cough is prevented, or even considerably alleviated, the inflammation will readily disperse, the immediate or proximate cause of its continuance being removed<sup>20</sup>.

By these means the stomach and first passages, the biliary vessels and hypochondriac viscera, will by the frequent concussions and agitations during the action of vomiting, have their obstructions attenuated and removed; their secretions will be restored to a natural state; digestion will be properly performed; good chyle will be produced; and consequently the quality of the blood will be mended, the body nourished, and health again be established. And as I am disposed to believe, the major part of the diseases incident to mankind, originate from a morbid state of

<sup>20</sup> “ If any remedy is capable of dispersing a tubercle,  
“ I believe it to be vomits.”

Simmons on Consumption, p. 66. An. 1782.

the stomach and bowels, or from putrid and offending matter lodged in them, our curative indications should be directed primarily, and principally, to remove from them every exciting cause. When that is accomplished, nature will exert the wonderful powers, with which the Omnipotent Author of the universe has endowed her, of restoring the parts of the body to a sound and perfect state.

As emetics are known, and acknowledged to be the most active and powerful agents in medicine; they should be used with great caution and circumspection. The judicious practitioner, will weigh and consider the symptoms and situation of the patient; and although there are few cases in which they may not be used with safety and advantage; yet he will sometimes find them improper. No person can be more persuaded of their good effects, and of their propriety in almost every disease, than I am; yet, let not the reader presume from this, that they are to be given indiscriminately, or that from my praising them so  
much,



much, I mean to insinuate that they will cure every disease, in every situation and circumstance. During pregnancy in delicate women, though they often vomit spontaneously, emetics, as they act in a different manner on the system, are very apt in the first months to occasion abortion. In such cases, I think they should be used very seldom, or indeed entirely omitted. I should not venture to give this caution, which militates against the practice of the first men in that line of the profession, if I was not convinced of its propriety from several instances that had occurred in my own knowledge. In scirrhus affections of the stomach, emetics are highly improper; and in some other diseases, which being generally known, and foreign to my subject, need not be enumerated here.

Some people are so unfortunate, as to vomit with great difficulty, and are acted upon in an uncommon manner by medicines of this kind. I therefore, as a general direction, recommend to begin in all cases



cases with a small, or under-dose, repeating and augmenting it according to the effects upon the disease, at longer or shorter intervals: and whenever it is found to disagree with the patient, its use must be discontinued, or omitted altogether; but in the course of my practice, such cases have very rarely occurred.

C H A P. VIII.

*Treatment in second period—astringents and opiates—  
cessation of the menses—myrrh and its preparations—  
third period—convalescence—tonics—case of hepatic  
consumption.*

**W**HEN purulent matter, or pus, is mixed in the expectoration, I am very cautious in ordering the bleeding to be repeated; except when the fever runs high, the pulse full and hard, with frequent pains and stitches in the breast and sides, increased on a full inspiration, then it may be done with safety and relief; always carefully attending to the patient's

“ Nec quidem ipso venæsectio hîc convenit, nisi ad  
“ præcavendam inflammationem Peripneumonicam, quo-  
“ ties scil. à dolore Pleuritico, potatione liberaliori liquo-  
“ rum Spirituosorum, à frigore recens percepto, atque  
“ aliis ejusmodi, Medico sagaci eam præ foribus esse  
“ suspicari

patient's strength, and not to be guided by the appearances on the blood, which is so generally looked upon as a criterion, and which we have already proved is so very precarious and uncertain.

The patient being arrived at the second period of the disease, when he spits up matter freely; when the cough is frequent and violent, especially in the morning, and at other times in a recumbent posture; when the hectic fever is completely established, with regular remissions and colliquative morning sweats. The intention of cure, is then to evacuate the pus in the speediest and most easy manner; to allay the distressing cough, and give ease and rest to the inflamed, tender lungs; to check the profuse discharge by the pores, and support the vital strength, the tone of the muscular fibre.

“susplicari liceat. Atque tunc etiàm sanguis, ob tabem  
 “præsentem et virium languorem, parcâ potiùs manu  
 “ventilandus, quàm profusè extrahendus.”

Morton Phthis. p. 174. An. 1689.

IF

If the purulent matter can be evacuated from the vomicæ as often as it is collected; not only absorption (supposing it took place) will be obviated, but the pus not being deposited in the air vesicles and ramifications of the bronchiæ, in such quantities, much laborious coughing will be prevented, and the tender inflamed lungs acquire rest, the great desideratum in the disease. By this means, the disease will be reduced nearly to the state of a single vomica, which we have before observed, often subsists for many years, even during a long life, without fever or danger; except just when it bursts, lest the matter, when in great quantity, should choak the patient; but from certain internal feelings, they know when the matter will appear, and guarding against it, there are few instances of its producing bad effects.

These desirable purposes can only be answered by exciting to vomit frequently, in the manner directed in the preceding chapter. It is wonderful to observe the effect

effect of this simple remedy<sup>2</sup>; the patients themselves are often astonished at the relief they experience, and confess it in the warmest terms. As by vomiting, a quantity of matter is immediately discharged from the lungs, they are sensible of instant relief, they breathe with less difficulty, and remain many hours almost free from coughing; their spirits get up, and as they sometimes exclaim, they feel themselves in another world.

Although in some cases it is difficult to persuade the weak and timid to begin such

<sup>2</sup> “ Egregiam verò vim medicaminum emeticorum  
 “ sæpiùs in eo expertus sum, quotiès scil. in maximo  
 “ discrimine versari videbatur, à gradu asthmatis aucto,  
 “ et ab inappetentiâ, et maximo languore indè conse-  
 “ quenti.” Morton Phthis. p. 241. An. 1689.

“ A Vomitorio levamen universim sensit, idque non  
 “ tantùm à symptomatis Phthisicis, verum etiàm Rheu-  
 “ maticis.” Ibidem, p. 317.

“ Sometimes if the strength of the patient will bear  
 “ it, and the looseness remit not with the purging reme-  
 “ dies, I prescribe a dose of the Indian root (Ipecac.) and  
 “ work it gently off, which oftentimes gives great relief,  
 “ when all other med. fail.”

Robinson on Consump. part 2. p. 54. An. 1727.  
 a course,



a course, confirmed custom not being easily overcome, and long prejudices having great weight even with those in health. Besides, such is the extensive influence of knowledge, that in chronic complaints, especially consumptions of the lungs, not only the patient, but every person they are connected with, become experienced physicians, and reason and dispute every inch of ground. But when the med. has been taken a few mornings, the sensible relief it occasions, removes every doubt, and induces them to persevere with great steadiness and punctuality.

In order to check in some measure the melting morning sweats, a draught of Tinct. Ros. or some of the Elix. Vit. acid, in any liquor, at bed-time, cools the patient, and prevents the discharge being so profuse; it may be united with an opiate, when that is necessary<sup>3</sup>.

The

<sup>3</sup> “ In the later stages of this disease, when a general  
 “ tendency to putrefaction takes place, it (the Elix.  
 “ Vit.)

The Sp. Vit. dulcis, in the quantity of two or three dr. to a pint of water, with some Syr. Pap. Rub. makes an elegant and grateful julep; a glassful of it may be taken frequently; it attemperates the heat, relieves the sinking spirits, and acts as a gentle tonic.

I consider it as essentially necessary to quiet the cough, and procure sleep; for which purpose, such a quantity of the opiate must be taken, and occasionally repeated as will effectually answer the purpose. In this, and in every other disease, where anodynes are required, that quantity, whatever it may be, that produces the desired effect, is the proper dose. Happily for the distressed patient, happily for the physician, rest and ease may always be procured by this special gift of heaven. Some inconvenience attends taking every med. of this class; they produce costive-

“Vitr.) cools and checks this tendency; it restrains the  
“colliquative sweats, and if the lungs are not injured  
“past repair, it is a very useful auxiliary.”

Bothergill Med. Obs. & Inq. vol. 5. p. 353. An. 1776.  
ness

ness in general, and sometimes sickness and giddiness. The first may be guarded against by proper laxatives, and the last may be relieved by drinking coffee early in the morning.

In common cases, I find it unnecessary to order any other medicine than the few I have mentioned. Many circumstances will arise, where the Physician must be guided by his own judgment; here the subject can only be treated in general terms; to descend to every particular symptom and variation, would only serve to swell the work, and embarrass the young practitioner. In this, and in many other diseases, I must say, (and I say it at my peril) a large quantity of medicine is not necessary. But among the luxuries of this dissipated age, medicine should be reckoned as one: however strange this may appear, it is a truth well known in almost every opulent family in this kingdom. On the smallest indisposition recourse must be had to medicine; pain is so great an evil, that it must not be borne, even though a few

hours would terminate the complaint. This occasions such a familiarity with draughts and boluses, that I am not surpris'd if we are sometimes accused of dealing them out too liberally. Though it is in some cases necessary to prescribe to the fears and apprehensions of timid patients, yet I cannot be persuaded to believe, that the physician has ever any other motive, any other end in view, than the recovery of the patient, and that by the speediest means. As custom has rendered the attendance of a very useful and respectable body of men necessary, it is much to be regretted, that some other method of rewarding them was not adopted, rather than the charge for their medicines. Perhaps by the visit, or by the year, would be a better mode; and then the patient would be convinced he swallowed no more than was merely and absolutely necessary; and the medical profession would be exempt from reflexions, which they are as far from deserving, as any body of men whatever.

- As

As the major part of those affected with Phthisis, are females; they are greatly alarmed at the cessation of their monthly periods, which usually takes place when the disease is confirmed, and are very solicitous for their return. As I consider this circumstance as merely the effect of the increased discharge by the lungs and pores, and general weakness of the system; it is not necessary to order any med. with an intention to its removal, as that will be obtained when the strength of the muscular fibre is restored.

Much has been said of late in praise of Myrrh in pulmonary complaints, both in its simple state, and when combined with Sal. Martis, alkaline and neutral Salts, &c. I have given it in every form, and sometimes with success. But in cases where the pulmonary hectic is confirmed, I have not seen it produce any relief. In this fever, I believe tonics of all descriptions will be found to increase the symptoms, as they do in all cases of inflammation. As I contend, that there is no such power in medi-



cine as is understood by the terms balsamic and pectoral, in their usual acceptation, I consider this Gum, with its accessories, as acting by its tonic power upon the stomach and first passages, and where such remedies are indicated, I have found it a valuable medicine. In great weakness and languor, where it is thought advisable to attempt relief in this way, I would recommend an infusion of the Myrrh in Simple Aqua Calcis. The particles of the Calx uniting with the fixed air in the gum, render the solution more perfect than any other menstruum I have tried<sup>4</sup>. The tincture when filtered, will sit light on the stomach, and may be combined with any thing that is thought proper.

If the plan I have been submitting to the reader's consideration, is adopted before great ravages are made in the constitution; before the body is greatly wasted, and the strength reduced, I am hopeful the third and last period of the disease

<sup>4</sup> See Macbride's Essays, p. 240. An. 1767. Ed. 2.

will seldom occur. But if from lateness of seeking relief, (as is too often the case) or from any other cause, the diarrhœa has made its appearance; I persist in recommending the Ipecac. as the strength will admit. If astringents are of any use (and in desperate cases we must attempt relief by every means, “at præstat certe anceps “remedium experiri, quam nullum,”) they should be selected from the mildest of the class. Small doses of torryfied Rhubarb, Infusion of Rhub. in Aqua Calcis. Decoët. Lign. Camp. and as acidity is frequently present in the first passages, the Decoët. Alb. with or without astringent vegetables, makes a very proper drink for common use. As multiplying remedies is always distressing to the patient, I have sometimes seen good effect from combining astringents with milk, and taken as diet, in the manner recommended by a very celebrated author<sup>s</sup>. These, and others of

<sup>s</sup> “Cum in tali igitur loco res sit, illud hoc modo  
 “componendum est: flores rosarum rubrarum siccata-  
 “rum,

of the like nature united with opium will frequently check the alvine discharge, and allow time for the exertion of other powers in the constitution.

Did our power over the operations of the body extend so far, as to regulate the discharge by the pores and intestines, in such a manner, as only to evacuate the offending matter; they would not be attended with any ill consequence. But the nîsus raised in the constitution, in order to discharge that offending matter, seems to give so strong a tendency to the

“ rum, balauftia, cortex malorum granatorum, cinna-  
 “ momum, fingulorum drachma una, coquantur in  
 “ lactis vaccini libra una. Cum ebullire incipit, frigida  
 “ aqua affunditur parva portione, ut reftinguatur et sub-  
 “ fidat; finitur iterum ebullire, et eodem modo reftingui-  
 “ tur; idque toties faciendum est, donec libra una ab-  
 “ sumpta, lactis simul et aquæ quod restat, libræ unius  
 “ mensuram adæquet. Tum colandus est liquor, quem  
 “ totum, commisto saccharo, partitis, uti commodum  
 “ erit, haustibus, ægrotus ebibet quotidie. Hac via  
 “ nutritur simul corpus, et venter comprimitur; nec  
 “ quicquam obstat aliorum ciborum, vel medicamen-  
 “ torum, usui hujusmodi diæta.”

Mead. Monit. et Præcept. Med. p. 49. An. 1751.

fluids,

fluids, and occasions such an irritation, or disposition in the excretory organs, whether the pores, intestines, stomach, or kidneys; that the discharge continues longer than is necessary to relieve the system; by which means the bodily strength is greatly reduced. When a med. is taken to excite vomiting in the old method, the coats of the stomach become so irritable, that sometimes the operation may be continued to any extent, by only drinking warm water. Sweating and purging, frequently continue long after the cause ceases to act. A ptyalism raised by a scruple of *Æthiops mineral*, has been known to continue, notwithstanding every means to stop, it for several weeks. Custom and habit have a wonderful power upon the bodily organs, as well as upon the mind; and an evacuation that has frequently taken place, will be more easily occasioned, and longer continued, than if the body had not been accustomed to it.

In this manner, I apprehend, the profuse morning sweats are protracted beyond the  
period

period necessary to relieve the constitution from the accumulated fluid; and therefore checking them, will prevent that reduction of vital strength, which always succeeds. But this must be attempted with caution and moderation; for whenever they have, by any violent means, been entirely prevented, the fever becomes continual, more severe, and every symptom exasperated. Upon this principle, I have recommended the few mild astringents beforementioned. Their quantity and use must depend upon the effects they produce; for in this, as in other diseases, it is not easy to determine *à priori* what will be a sufficient dose; for which reason and some others, I have avoided giving any formulæ.

In the period of convalescence, when the symptoms abate, when the cough diminishes, the patient gets natural rest, and the hectic fever and morning sweats diminish; the same means must be persisted in till these symptoms are removed entirely. And when the fever is removed,



ed, and not before, then tonics and bracers may be safely administered. For a languor and weakness will often remain after the other symptoms have disappeared. In this case, bitters, steel, the Myrrh mixture of Griffith's, and the Chalybeate waters of Islington or Tunbridge will have a happy effect in restoring the tone of the first passages, and strengthening the digestive faculties. But, as we have observed, all tonics in their action on the human body, quicken the circulation and augment the heat, we must be exceedingly cautious in giving them whilst any fever remains, and even when it is no more. There is a power in the constitution, when freed from the cause producing disease, that in a wonderful and inexplicable manner restores the machine to health and vigour, and that without any other assistance than the regulation of diet and exercise.

In treating on a disease, attended with so many alarming symptoms, and so frequently terminating fatally; in which au-  
thors

thors of the first reputation, and practitioners of the greatest eminence, have ordered such a quantity and variety of medicine : it may appear, that the remedies I have recommended being so simple and few in number, I mean to reflect upon the efficacy and expediency of medicines in general. Far be such an idea from my mind ! Medicine may be truly said to be of Divine institution<sup>6</sup> ; and man, in no act upon earth, so greatly resembles a superior Being, as in the instance of relieving pain, and curing diseases, which would, without His aid, prove mortal. The use of medicine was never decryed, but by those ignorant of its value ; it is the

<sup>6</sup> The DIVINE PATTERN of all virtues employed His time, and exemplified His Divinity, not in overturning kingdoms, or establishing codes of laws for their governance ; not in idle disputations and controversy about points of doctrine ; but in restoring the blind to sight, the lame to walk, and the sick to health. The art of medicine is as superior to every other art or profession, as health is more valuable than any other wordly good. *Medicina omnium artium preclarissima est.*

abuse,

abuse, not the use, that I wish to expose. And, I hope, I may be permitted to say, (without offending the fastidious and interested) the more we simplify our practice, the better we shall ascertain the effects of the remedy, and the greater will be our success in curing diseases.

Before I quit this part of my subject, it may not be foreign to my design to make some observations on consumptions that proceed from a diseased liver, having reason to believe they are more frequent, than is usually imagined; and although they appear easy to be distinguished from Phthisis Pulmonalis, yet they have been mistaken, and supposed to arise from vomica.

Two cases of this kind have occurred to me lately. One of them being more distinctly marked than the other, I shall relate the particulars, and my reasons for supposing it hepatic.

A gentleman near sixty, informed me, that ten years ago, he had a violent fever and ague, in which the intermissions were  
so

so short, as not to afford time for taking a sufficient quantity of bark to prevent a return of the fit, and it was usually vomited up again. Sometime after recovering, from this fever, in which he was attended by an eminent physician, he was suddenly seized with a discharge of matter and blood from his lungs, in such a quantity, as to be taken for an hæmoptoe; it was exceedingly foetid, brown, and the discharge continued long. He gradually recovered a tolerable degree of health; and from that time, every two or three years, he had a similar attack, but the matter less in quantity, and not so offensive. His pulse was so regular, and resembling health, that (he said) it was thought proper to increase its velocity by stimulating med. He had always a pain in the region of the liver, far back, and violent upon pressure; and he could foretel the eruption of matter, from pains in the right shoulder, back of his neck, and by some other sensations, which he could not easily describe. His breathing had  
never



never been affected, and after these attacks he could sing and talk as long, and as forcibly as in his best health. During the whole of his illness, he never had morning sweats, and but very little cough, the matter coming up rather with a hawking, and strong expiration, than coughing; and in the intervals, he always spat a large quantity of phlegm and saliva, but no matter mixed with it. His habit was costive to a great degree, and his urine high coloured.

When he consulted me, I found him exceedingly emaciated, and reduced in his strength. His case having been supposed a vomica, the severest abstinence had been enjoined. His pulse was eighty in a minute, soft and regular; little or no cough, breathing perfectly free and easy; soreness and pains all over his limbs, and the muscular parts of his body. Sometime before this, he had ceased spitting matter more abruptly than usual; he was therefore apprehensive of a return, which I  
readily



readily agreed in, from perceiving a copious settlement in his urine, without any abatement in the symptoms. In a few days his pulse rose to ninety and an hundred, he became restless, uneasy, and exceedingly fretful; when he began to spit matter, at first white and laudable in spherical masses <sup>7</sup>, afterwards brownish, like diluted chocolate, and he thought it tasted of garlic; but still with scarcely any cough, no increase of fever at night, or appearance of morning sweats, his breath perfectly free, and his pulse returned to eighty. On breaking wind forcibly upwards, he feels such severe pain in the affected part, under the false ribs, as to make him cry out, and suddenly jump up in bed. He brings the matter up with great ease, and never has any thing like a fit of coughing, as is usual when the lungs

<sup>7</sup> We are not to suppose because pus appears in spherical masses, that it comes from cavities of that form; but that it is caused by the viscid and tenacious quality of its particles, closely adhering to each other.

are diseased. When the matter was discharged freely, his uneasiness abated, and he got some rest.

On considering the particulars attending this case, which I had from himself in a conversation that lasted two hours, I did not hesitate to give it as my opinion, that his lungs were sound, his liver diseased and greatly wasted, that he would be subject to returns of spitting matter as long as he lived, and that a cure was not to be expected. As in this I differed in every particular from my predecessors, I shall give my reasons.

The fever in the beginning, which was treated as an irregular intermittent, I imagine was attended with an acute inflammation of the liver, terminating in an abscess, on the superior part in contact with the diaphragm, to which it adhered. As the matter dissolved the substance of the liver, it gradually penetrated into the thorax, and as the lungs are in contact with the diaphragm, and probably adhering to it, the matter would pass through  
their

their substance into the bronchiæ <sup>8</sup>, and be discharged, as is mentioned in the quotation p. 90. of this work. The matter in the first eruption was more in quantity, and more foetid, than if it had issued from a vomica; and its brown colour seemed to mark the materials it was composed of. No symptoms of diseased lungs preceded it. Had the quantity of matter spit up, which he said amounted to gallons, been furnished by the lungs, their substance would have been greatly wasted, there would have been cough and dysp-

<sup>8</sup> “ When (the abscess) seated on the convex part of  
 “ the liver, if the adhesion be to the peritonæum lining  
 “ the common teguments, the pus may make its way  
 “ through these, and be discharged outwardly; or, if the  
 “ adhesion should have been to the diaphragm, the pus  
 “ may penetrate through this, and into the cavity of the  
 “ thorax, or of the lungs; and through the latter may  
 “ be discharged by coughing. When the abscess of the  
 “ liver is seated on its concave part, then, in consequence  
 “ of the adhesions, the pus may be discharged into the  
 “ stomach or the intestines; and into these last either di-  
 “ rectly, or by the intervention of the biliary ducts.”

Cullen first lines, § 421. Ed. 4. An. 1784.

nœa,

noëa, as is usual in such cases. The absence of fever, and the costive habit, seem to point directly to the liver, for it is a criterion of that organ being diseased (in acute inflammation the pain arises chiefly from its peritoneal coat) that the pulse is scarcely accelerated, but frequently slower than when in health. The matter certainly passed through, or came from the lungs, and yet there had not been any symptoms of hectic fever. An intelligent apothecary who had attended him in a former attack, particularly noticed the calmness of his pulse, and the absence of hectic fever; that there was no increase of heat in the evening, or diminution in the morning, but uniform and continued. What becomes of the doctrine of absorption in this case?

I have introduced these particulars, as an argument against the absorption of pus, being the cause of the hectic fever; and not as treating particularly on the hepatic consumption; I shall therefore only observe, that in all obstructions of

the liver, the argentum vivum is an effectual remedy in the early period; that this disease is less rapid than Phthisis Pulmonalis; will bear a more nourishing diet; and that gentle emetics are equally necessary to evacuate the matter sooner, than it could be by the efforts of nature.



C H A P. IX.

*The necessity of air—phlogiston defined—air phlogisticated by respiration, combustion—how corrected—how to prepare dephlogisticated air, fixed air, phlogisticated air, and nitrous or test air—use of pure elemental air in Phthisis—situations best for the consumptive—riding on horseback—passions of the mind—amusements.*

AIR is so essentially necessary to every production of nature, that even vegetables, when deprived of it, wither and perish. The many discoveries made, in this part of natural philosophy, of late years, has brought us more intimately acquainted with the component parts of the atmosphere than our predecessors were. And by the experiments that have been made, and are daily making, we not only know that the constituent parts of air

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may

may be changed and vitiated by passing through the lungs of animals, so as to be rendered unfit for the purposes of life; but also how air so contaminated is again purified and rendered fit for respiration. We are also enabled to ascertain the degree of the air's purity in any given place, whether country or town, comparatively with that of any other part, with nearly as much exactness and facility, as we can determine the nature of any other fluid. These discoveries, like all philosophical inquiries properly directed, will tend to the good of mankind in general, and very considerably conduce to the improvement of the medical science.

As this work may possibly fall into the hands of those not familiarly acquainted with this branch of philosophy, it may not be displeasing to them, to relate such experiments as are immediately connected with the subject.

We have observed, that air passing into the lungs in respiration, receives from the  
body

body the principle termed phlogiston<sup>1</sup>, and becomes charged with it more than before. When air is saturated with phlogiston by the breathing of animals, by combustion, or by any other means, a lighted candle immersed in it, is immediately extinguished; an animal confined in such air expires in a few minutes<sup>2</sup>. This fact being established, it might be supposed, that considering the multitude of animals on the earth, the air would soon be rendered unfit for their use: but the watchful eye of Providence has ordained a remedy as general as the disease. Phlogiston is the food of

<sup>1</sup> “ By phlogiston is generally understood that principle in combustible bodies, on which their inflammability principally depends; that principle to which metals owe their malleability and splendor; that which combined with vitriolic acid forms sulphur; that which diminishes respirable air. Now inflammable air is that very principle which alone is truly inflammable, as Mr. Volta has elegantly shewn. Combustible substances are either animal or vegetable, and they are inflammable only as they yield inflammable air.”

Kirwan Phil. Trans. vol. 72. part 1. for 1782.

<sup>2</sup> See Dr. Priestley's numerous experiments on this subject.

plants;

plants; they not only thrive in such air, but have the power of removing the offending principle, and leaving the air pure and salutary. Vegetables at the same time they correct phlogisticated air, emit from their leaves pure imperial or dephlogisticated air, which probably is the means of performing this process. Green vegetables put into a glass vessel filled with water, and inverted in the same fluid, throw out from their leaves pure dephlogisticated air, in summer very plentifully, and by this means it may always be obtained. But it is a singular circumstance, that light is absolutely necessary for the production of this air, for in the dark, vegetables emit a noxious air. Plants deprived of light soon lose their colour, odour, and other sensible qualities<sup>3</sup>.

Air

<sup>3</sup> May not this be one reason why the human body, is more refreshed by sleep in the night, than in the day? And may it not therefore be an inducement to restrain the modern rage for late hours, could we convince the votaries

Air faturated with phlogiston and moisture from the lungs, in which a candle was extinguished instantly, as if it had been put into water, was in one hour, by having a sprig of growing mint confined in it, rendered so pure, that a candle burned at the bottom of the vessel as well as in the common atmosphere. This experiment points out the use of vegetation, even in towns, in a manner not known before the present age.

It has been supposed, that the common respirable air consisted of three parts, phlogisticated or inflammable air, fixed air, and pure elemental or dephlogisticated air. But an ingenious and learned chymist has demonstrated, that fixed air is formed by the union of phlogiston, condensed to a certain degree, and de-

ries of fashion, of pleasure, and dissipation, that it destroys their beauty, shortens their lives, and brings on premature old age? For they not only breathe air highly phlogisticated by the respiration in crowded assemblies, but by lying in bed they lose the cool refreshing morning air, destined to exhilarate and brace the body after sleep.

phlogisticated



phlogisticated air, in the proportion of 14.661 gr. of the former to 85.339 gr. of the latter; “and that phlogiston when  
“ exceedingly rarified, as it is in inflam-  
“ mable air from metals, forms some other  
“ as yet unknown compound<sup>4</sup>.”

The

<sup>4</sup> “Hence we may see, why the whole of any quantity of common air can never be converted into fixed air; for no part of it will unite with phlogiston, but the dephlogisticated part (which never exceeds one-third part of the whole.) This Mr. Scheele has decisively proved by exposing liver of sulphur to a mixture of phlogisticated and dephlogisticated air; the mixture was diminished in the same proportion as it contained dephlogisticated air, and no more.”—Scheele, § 43.

“Phlogisticated air, therefore, is not the usual product of common phlogistic processes; but the phlogisticated residuum that is found after such processes must have pre-existed, as that evidently does which is found after the mixture of nitrous and very pure dephlogisticated air, for almost the whole of this last is turned into air which is absorbed by water, and precipitates lime, as we have already seen, so that no part of it is converted into phlogisticated air, this being immiscible with water. Now common air is affected by nitrous air just in the same manner, and differs only in degree; therefore the phlogisticated air, which is  
“ found

The different kinds of air, we have had occasion to mention so frequently, and also another, called nitrous air, used as a test of the qualities of the others, may be thus prepared.

Dephlogisticated air is procured from deflagrating Nitre, in great abundance; one pound furnishing 12,000 cubic inches of this elastic fluid, a quantity more than sufficient for a person to breathe 48 hours. It may also be got, by adding the Vitriolic acid to the calx of any metal, and a moderate heat applied to the vessel.

Fixed air is procured from any ferment-

“ found after its phlogistication in the usual processes,  
 “ was not produced by those operations, but pre-ex-  
 “ isted.”

“ Phlogisticated air consists of fixed air super-saturated  
 “ with phlogiston, as sulphur does of volatile vitriolic  
 “ acid super-saturated with phlogiston; and as sulphur is  
 “ not generally formed when the vitriolic acid unites to  
 “ phlogiston, but only volatile vitriolic acid, so neither  
 “ is phlogisticated air each time that pure air unites to  
 “ phlogiston, but rather fixed air; I say *super-saturated*,  
 “ because it contains such a quantity of phlogiston as to  
 “ be insoluble in water.”

Kirwan Phil. Transf. vol. 72. part 1. for 1782.

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ing matter; chalk and oil of vitriol is commonly used. Mixed with lime water, it precipitates the lime, leaving the fluid pure and tasteless. Not only water, but every substance eagerly absorbs it. The Abbe Fontanna, filled a close room with fixed air, and in a short time he could discover no vestige of it. Being specifically heavier than the atmosphere, it does not rise to any height, but lies upon the ground in places where it is formed, as in the Grotto del Cane near Naples.

Inflammable air is procured from the vitriolic acid and any metal<sup>5</sup>.

Nitrous or test air, is made from smoaking Spirit of Nitre and filings of copper. When this air is mixed with common air,

<sup>5</sup> Dr. Priestley and Mr. Lavoisier have discovered a much cheaper process of obtaining inflammable air; by the means of the steam of water passing through iron shavings contained in a tube heated over a furnace, the air passing through the worm of a worm tub. By this means, from one ounce of iron shavings, 600 ounce measures of air is procured, being 200 more than from the same quantity and vitriolic acid.

a brown

a brown effervescence ensues, and the latter diminishes in proportion to its purity, or to the quantity of dephlogisticated air contained in it. Whenever, therefore, it may be required to determine the purity of air, nothing more is necessary than to fill a bottle with water, empty it in the air proposed to be examined, and after a few minutes cork it up, and tie it carefully over with bladder; two measures of this air, and one measure of Nitrous air being mixed, will, by the diminution, shew its degree of purity, compared with any other air as a standard. But the experiment must be made as soon as possible; for it has been found, that air kept in bottles, however secured, for some time, loses its predominant quality, and becomes similar to the common atmosphere where it has been kept.

Should the method recommended by a learned and ingenious author<sup>6</sup>, of giving dephlogisticated air medicinally, become familiar in common practice; I am strongly

<sup>6</sup> Dr. A. Fothergill Hints on Animation.

disposed

disposed to believe it would prove a valuable addition to the treatment of pulmonary complaints. But as we find it very powerfully increases deflagration, and the consumption of burning matter, it is possible, that breathing it entirely, even for a few hours at a time, might be too great a change upon the system, discharging the phlogiston from the habit, faster than is consistent with life, and perhaps occasion a too rapid waste of the living principle. To avoid any inconvenience of this kind, and to proceed *festina lente* in an unbeaten path; might it not be administered out of bladders, or glass jars, with stop cocks, like any other medicine, as often as the physician should think proper to direct? A machine like the Indian hooker, may be contrived, by which the patient might inhale it when in bed, in the manner of smoking. Given in this way, it would rather mend the air the patient breathed, than change it altogether; and as all sudden alterations are dangerous, it will be safest to begin, at least, by slow degrees.

As.



As this philosophy, notwithstanding the rapid progress that has been made in it, is still in its infancy, time and repeated experience can only determine the medicinal virtues of artificial airs. On this ground I am not warranted to speak decisively on the subject.

We are taught that the autumn is the most dangerous season to the consumptive, “Autumnus Tabidis malus<sup>7</sup>,” is quoted by every author. This might have been the case in Greece and Latium, but certainly in this northern climate the spring more frequently proves fatal than any other season. In the autumn, the weather is for the most part mild and moderate, and continues so till after Christmas; then the frost sets in, and remains with intermissions till February or March; about

<sup>7</sup> Hippocr. App. sect. 3.

“Erat autem omnibus præscriptis gravissimum quidem ver, et multos occidit. Æstas autem facilima, et paucissimi perierunt. Autumno verò et sub pleiada rursus multi moriebantur quartanarii.”

Ibid. de Morbis. Popul. lib. 3. sect. 3.

which time the north easterly winds are as regular as the trade winds in southern latitudes. These piercing winds are the most prejudicial to complaints in the breast, often blasting the fair prospect of a recovery, and proving fatal in a short time; they should be avoided with anxious solicitude. In this country, even the month of May is very different from that painted by the Poets, when the Loves and the Graces sported in the shade, adorned with the flowers of the spring. The patient before he ventures abroad, should observe the wind, and if it is in the East or N. E. by no means to expose himself to it out of a carriage, and unless the sun is full out, he should remain in the house. Indeed when the circumstances will admit, the safest course will be to visit a warmer climate during the winter and spring.

Whether the theory I have endeavoured to establish, in explaining the nature of the pulmonary hectic fever, shall stand or fall by the test of experience and observation; there is no doubt, but in all  
complaints

complaints of the lungs, pure air is essentially necessary to the cure, and if possible it will appear more so upon the principles we have been explaining.

It is to be lamented that in phthisis, this remedy like every other, is seldom sought, till it can be no longer of any real benefit. How often do we see an unfortunate patient, worn down to the very brink of life, (when the only satisfaction he is capable of tasting is rest and quietness,) hurried out of town to Bristol, or some place at a distance from the capital, expire on the road before he reaches half way to his destination! Whereas had he removed early in the disease, before his strength had been destroyed, and his lungs wasted, pure country air, aided by proper auxiliaries, might have restored him to the comforts of society. Whenever therefore it is in the patients power, let me intreat him early in the complaint to fly the populous city, and breathe the air purified by vegetation; and not loiter away his time in pursuing ideal plans of  
cure,

cure, for whatever is beneficial in the town, will be doubly so in the country <sup>s</sup>.

The sentiments of a late eminent Physician are so just and apposite, that I shall gratify the reader by substituting his words for my own. “In the neighbourhood of most great towns in England, as well as London, there are places that have acquired a reputation among the inhabitants for the peculiar healthiness of their situation, I will suppose those situations are well chosen; that the soil is dry; no stagnant waters in the neighbourhood; properly ventilat-

- <sup>s</sup> “Fly the rank city, shun its turbid air;  
 “Breathe not the chaos of eternal smoke  
 “And volatile corruption, from the dead,  
 “The dying, sickning, and the living world  
 “Exhaled, to sully heaven’s transparent dome  
 “With dim mortality. It is not air  
 “That from a thousand lungs reeks back to thine,  
 “Sated with exhalations rank and fell—  
 “It is not air, but floats a nauseous mass  
 “Of all obscene, corrupt, offensive things—  
 “While yet you breathe, away”——

Armstrong Art of preserving Health. An. 1744.

“ed,

“ ed, yet not exposed to the keen north-  
 “ east winds; where it will be easy to  
 “ find sheltered walks, rides, and every  
 “ invitation to be abroad in fit weather,  
 “ without hazard from wet and cold.  
 “ Such, I believe, from the few places I  
 “ know of this kind, are those selected  
 “ for the retreat of consumptive patients,  
 “ in the vicinage of large towns and cities.  
 “ And here it may not be improper to  
 “ take a general view of such as are re-  
 “ commended for the like purpose in the  
 “ neighbourhood of London.

“ The town is surrounded almost by a  
 “ ridge of eminences, inclosing, besides the  
 “ city, a low plain to the westward of  
 “ considerable extent; on the north,  
 “ Highgate, Hampstead, and Kensington  
 “ Gravel-pits; on the south-east, Black-  
 “ heath, Clapham, and Putney. The  
 “ summits of these may be called, com-  
 “ paratively, high ground, and are very  
 “ much exposed to the sharp north-east  
 “ and easterly winds.

“ To direct our patients to any of these  
 R places



“ places early in the spring, whilst those  
“ winds are for the most part as stationary  
“ as the trade-winds, seems to be expof-  
“ ing them too much to an air that is  
“ very unfriendly to fuch complaints.

“ The vales, efpecially to the fouth-  
“ eaft and west of London, as Camber-  
“ well, Peckham, the lower parts of Clap-  
“ ham, the dryer parts of Lambeth and  
“ Batterfea, Fulham, Chelfea, Brompton,  
“ and Kenfington, and other fheltered,  
“ dry places about the town, would in the  
“ fpring undoubtedly be the moft proper.

“ As the more temperate feafon ad-  
“ vances, higher fituations may be allow-  
“ ed; and it would feem as improper, to  
“ fend a confumptive patient in fummer  
“ to the low marfhy grounds on the banks  
“ of the Thames; amongst the gardeners  
“ grounds at Batterfea, or at Fulham,  
“ abounding with the moft putrid exha-  
“ lations of manure and corrupting vege-  
“ tables, as it would be to order them in  
“ winter to the top of Highgate or Hamp-  
“ ftead-hill, or the bleaker air of Black-  
“ heath.

“ heath. Islington, the general refuge of  
 “ the city, would be less exceptionable,  
 “ was it not quite open to the keenest  
 “ north-east winds in the spring; and in the  
 “ summer to the smোক of the city, driven  
 “ upon it by the southerly winds<sup>9</sup>.”

Consumptive patients are very generally ordered to Bristol, to drink the waters of that place, celebrated for their efficacy in such complaints. If the journey is undertaken early, before the strength is exhausted, and the lungs irremediably injured; the exercise of travelling, and drinking a pure light water, passing through a chalky soil, will probably be of use. But how far these waters may contain a restorative quality, superior to any other of equal purity, and specific gravity, I cannot determine. Pure, soft, light water, when drank in large quantity, I conceive to be highly efficacious in the cure of chronic diseases, attended with inflammation, especially when assisted by absti-

<sup>9</sup> Fothergill Med. Obs. & Inq. vol. 5. p. 361. An. 1776.

nence, clear air, and such exercise as the strength will bear without fatigue. All these may be found at Bristol wells. The water is soft and light, with some degree of warmth, and therefore well adapted to Phthysical complaints. The air is pure, the situation elevated; and the generality of those who seek relief at a distance, are enabled to take such exercise as may be thought proper upon the Downs, or in cold weather to lodge on the south-side of the hill. On the whole, I do not know a better station, provided the patient goes early in the disease, in the very beginning; and without that, no remedy can be effectual.

Of all the various means that have been attempted to stop the progress of this ravaging disease; none has been so often recommended, or so highly celebrated, as riding on horseback. The learned Sydenham, who deservedly lies upon the same shelf with the father of physic, had so high an opinion of this exercise, that he asserts, neither mercury  
in

in the lues venerea, nor the cortex peruvianus in intermittent fevers, are more certain remedies than riding on horseback is in Phthisis Pulmonalis; provided the journies are sufficiently long, and the traveller takes care to have his linen well aired <sup>10</sup>.

When

<sup>10</sup> “ Neque magis hypochondriacis prodest hoc exercitii genus, quàm Tabidis Phthisicisque, quorum  
 “ nonnulli mihi sanguine juncti multum terrarum equo  
 “ vectore peragrantes, ex meo consilio, sanitati sunt restituti; cum certò sciam me vel Medicamentis quantivis pretii, aut alia methodo, quæcunque demum ea  
 “ fuerit, nihil magis iisdem proficere potuisse, quàm si  
 “ multis verbis hortatus fueram ut rectè valerent. Neque in levioribus tantum malis, crebrâ tussî et macie  
 “ stipatis, id remedium obtinuit, sed et in Tabe tantùm  
 “ non deploratâ, ubi nocturnis sudoribus jam etiam accesserat Diarrhœa ista superiùs dicta, quæ Phthisi confectis mortes prænuntia solet esse, atque adeò ut plurimum ultima rerum linea. Verbo dicam. Quantumcunque exilialis *Phthisis* et sit et audiat, utpote quâ  
 “ intercunt duo ferè Trientes eorum quos morbi Chronici jugulant, hoc tamen sanctè assero, quòd neque  
 “ *Mercurius* in *Lue Venereâ* neque *cortex peruvianus* in *Intermittentibus* efficaciores extent, quàm in *Phthisi* curandâ *Exercitium* jam laudatum; modò æger curet, ut  
 “ lintheamina

When an author of such extensive practice, learning, candour, and celebrity, makes an unqualified assertion, which unfortunately for the diseased, is universally known to be void of foundation ; it surely ought to humble every writer in his own eyes, and teach him to speak with diffidence and modesty of the remedies he recommends.

It is well known to every practitioner, who has been conversant with complaints of this kind ; that the exercise of riding on horseback, unassisted by other remedies, never cured the Phthisis Pulmonalis ; on the contrary, the indiscriminate use of this exercise, has, I am convinced, very

“ linteamina lecti probè fuerint arefacta, atque etiam ut  
 “ satis longa itinera emetiatur. Attamen hoc notan-  
 “ dum quòd vitæ ἀκμὴν prætergressis multo diutius in  
 “ hoc exercitio persistendum, quàm infra istam ætatem  
 “ positis. Atque hoc multiplici experienciâ, quæ vix  
 “ me fefellit unquam, didici : Et licèt equo vehi Phthi-  
 “ sicis præcipuè conferat, tamen et itinera curru facta  
 “ mirandos sanè effectus quandoque ediderunt.”

Sydenham Epist. ad Dr. Cole. An. 1705. Ed. 3.

frequently



frequently aggravated every symptom of the disease <sup>11</sup>.

In coughs without inflammation, before tubercles are formed, or at least, where they are not arrived to any degree, it certainly will be of use; as no exercise so effectually strengthens the solids, and removes obstructions in the hypochondriac viscera. But when the tubercles are increased in number and magnitude, or when vomicæ are formed; where the parynchematous substance of the lungs is much inflamed; where rest and quiet are so essentially necessary; agitation on horse-back must be extremely distressing to the patient, and greatly increase the inflammation <sup>12</sup>. Add to these considerations,

<sup>11</sup> “ Hic vero Phthificus alter est de duobus, quibus  
“ laudata adeo ab Sydenhamio equitatio mortem accele-  
“ ravit ”

Morgagni de sed. et caus. Morb. lib. 2. Ep. 22. Art 13.

<sup>12</sup> “ Errant sæpè medici, dum exercitationes ægris et  
“ valetudinariis imponant, præsertim Phthificis, quibus  
“ equitatio indiscriminatim imperatur.”

C. Wintringham de Morb. Quibusd. Com. § 73.

An. 1782.

that

that the exercise is usually taken at the most improper season ; in the middle of the day or afternoon, when the hectic fever has come on, and consequently the tender lungs are more unfit for motion. Whereas, when the exercise is advisable, it should be taken in the morning during the remission of the fever, in a slow, gentle manner, for even then all hurry or violent motion by accelerating the circulation and quickening respiration will do harm, increase the symptoms, and probably produce hæmoptysis. In fine weather, the more early the patient is out, the better ; as it both avoids the heat of the sun, always fatiguing to the sick, and prevents the continuance of the morning sweats by early rising, and we have presumed the air is actually more refreshing, and invigorating in the morning, than when the sun has advanced in his journey ; there being a greater quantity of dephlogisticated air emitted from plants of every kind, and a less proportion of phlogiston in the atmosphere.

Were

Were riding on horseback, and country air, productive of the good effects we are taught to believe; the disease would scarcely ever prove mortal but in great cities, where these luxuries are not to be procured, save by a chosen few, the favourites of fortune. So far from this being really the case, it is frequent and fatal in every county in England; where every person enjoys the one, and very generally the other in some degree. But even allowing riding long journies to be as effectual, as Sydenham has asserted; how few are there among the consumptive, whose circumstances will permit them to make the experiment! The greater number being among the lower and middling class of the people, who cannot afford the expence of breathing country air, so peculiarly requisite in every period of the disease.

In the convalescent state, when the patient is recovering, when the fever abates, and the cough and spitting is diminished, easy motion on horseback, in the morning and forenoon, as it agitates the whole system,

system, will greatly assist in the recovery of perfect health ; but where any fever is present in the afternoon and evening, riding is by no means to be attempted<sup>13</sup>. Before this period, if circumstances will permit, they may go out in a carriage in the forenoon ; but even that must be avoided in the evening when there is any fever. This exercise may be continued as long as they can bear it without fatigue. When a carriage cannot be procured, let the sick move about a garden, or in the fields when the weather is fair ; or wherever there is vegetation and shelter from the sun. Their motion should be gentle, even, and slow ; avoiding every thing that may augment the quickness of breathing, particularly, going up and down stairs, or any acclivity.

The consumptive should go to bed early, lie upon a hair matrafs with slight covering, and get up soon in the morning, the even if they are obliged through weak-

<sup>13</sup> See a paper by Dr. Dickson, Med. Obs. & Inq. vol. 4. p. 213. An. 1772.

ness to lie down in the course of the day. For nothing weakens and relaxes the body so much, even in health, as lying several hours in the morning, dosing between sleeping and waking; its effects are similar to a warm bath, and nearly as enervating. But in the disease under our consideration, it is peculiarly prejudicial, as it promotes and prolongs the colliquative sweats, which by early rising are checked, and the subsequent languor in some measure prevented. Independant of these considerations, the heat of the bed has been, in the opinion of men eminent in the profession<sup>14</sup>, thought to increase pleurifies and inflammations in the breast: how improper must it then be, where a continual inflammation subsists? This is an additional argument in favour of early rising, and I wish any thing I could say, would induce the luxurious, the indolent, the effeminate, and especially the consump-

<sup>14</sup> Sydenham — Musgrave, Gulst. Lect.— Huxham. Pringle.



tive to listen to so salutary an admonition.

We are often surpris'd to perceive the minds of Phthifical patients wonderfully supported by hope, through every stage of the disease, even to the last hour of their lives. Firmly persuaded they shall recover their health, and live to execute the numerous plans they are ingenious and industrious in forming. This may proceed from the absence of severe pain, the lungs not being endowed with exquisite sensibility; and the daily remissions of the fever is a ground to hope it will in time entirely disappear. From whatever cause this happy disposition originates, it should by every possible means be encouraged; and every thing that is liable to disturb the quiet and serenity of their minds assiduously guarded against<sup>15</sup>. Such amusements as their situations permit them to share in, and to which they are inclined, will not only alleviate their sufferings, but, from the intimate sympathy subsisting be-

<sup>15</sup> Maynwaringe on Consump. p. 65. An. 1668.

tween the body and mind, contribute not a little to remove the complaint. Above all, music produces this effect in an eminent degree; it gently soothes the imagination, harmonizes the passions, and attunes every jarring element in our frame to quiet and rest. This was the opinion of the respectable author of that elegant poem, the *Art of Preserving Health*<sup>16</sup>, where we are at a loss which to admire most, the justness of the medical precepts, or the beauty and harmony of the numbers in which they are delivered.

- <sup>16</sup> “ There is a charm, a power, that sways the breast,  
 “ Bids every passion revel or be still;  
 “ Inspires with rage, or all our cares dissolves;  
 “ Can soothe distraction, and almost despair.  
 “ That power is music:—  
 “ Music exalts each joy, allays each grief,  
 “ Expels diseases, softens every pain,  
 “ Subdues the rage of poison, and the plague;  
 “ And hence the wife of ancient days adored  
 “ One power of med’cine, melody, and song.”

Armstrong’s *Art of preserving Health*. An. 1744.

## C H A P. X.

*Change of climate—sea voyages—efficacy in Phthisis—  
 steams and vapours—singular instance of the effects  
 of sea sickness—purity and healthfulness of sea air—  
 proper voyages—Madeira, Mediterranean.*

**M**ANKIND being very early sensible of the great influence the atmosphere had in diseases, it became a natural expedient to attempt the recovery of health by moving from one place to another, as whim, fashion, or judgment directed. When this idea was once familiar to the mind, sea voyages would be used, if only as a mode of conveyance. And accordingly we find them recommended by ancient and modern authors. Their effects in Phthisis Pulmonalis is mentioned among the former, by Celsus<sup>1</sup> and

<sup>1</sup> “ Quod si vero Phthisis est, opus est, si vires pati-  
 untur longa navigatione. Si id imbecillitas non finit  
 “ mare

and Pliny<sup>2</sup>. Among the moderns, by Boerhaave<sup>3</sup>, Mead<sup>4</sup>, Whytt<sup>5</sup>, Cullen<sup>6</sup>, Fothergill<sup>7</sup>, Gilchrist, and others.

In

“mare tamen, sed non longe, vectari commodissimum  
“est.” Celsus, lib. 3. cap. 22.

“Utilis etiam in omni tussi est peregrinatio, naviga-  
“tio longa, loca maritima.”

Ibid. lib. 4. cap. 4. sect. 4.

“Si vero pituita Stomachus impletur utilis navigatio.”

Ibid. lib. 4. cap. 5.

<sup>2</sup> “Quin et vomitiones ipsæ, in stabili volutatione  
“commotæ plurimis morbis capitis, pectoris, oculorum,  
“medenter, omnibusque propter quos elleborum bi-  
“bitur.” Plin. Hist. lib. 31. cap. 6.

“His accedunt exercitationes, navigationes, locorum  
“mutationes, gestationesque. Veteres maxime laudarunt  
“longas navigationes, et privatim (ut Celsus auctor est)  
“ex Italia in Alexandriam Ægypti; gestationes vero et  
“in navi per mare (quod aër falsuginosus, auctore  
“Aretæo, plurimum valeat ad ulcera siccanda) et in  
“lectulo pensili, et in lectica aut in cathedra oblonga  
“ (Aureliano auctore) utilissimæ fuerunt ab antiquis ges-  
“tationes in Phthificis deprehensæ.”

Prosper. Alpin. Med. Method. lib. 8. p. 508. Lug.  
1719. Ed. 2.

<sup>3</sup> Aphor—sect. 857, 858.

<sup>4</sup> Monita et Præcepta Med. cap. 4. De febris lentis  
An. 1751.

<sup>5</sup> “A young gentleman, lately my patient, who had  
“a very

In cases where the change of climate has proved remarkably successful, I am disposed

“ a very delicate nervous system, and whose stomach and  
 “ intestines were so uncommonly sensible, that a single  
 “ stool, procured even by Elix. Sacrum made him faint-  
 “ ish ; and vomiting or purging was almost sure to bring  
 “ on fainting fits, with slight convulsions. This person,  
 “ I say, had his constitution so changed while he was at  
 “ sea, that although during a voyage of four or five  
 “ weeks, *he vomited much every day*, and purged fre-  
 “ quently ; yet he had neither any faintings, nor was  
 “ sensible of any particular weakness in his stomach and  
 “ bowels. After this voyage, he had no return of these  
 “ fits, to which for some time before he had been liable,  
 “ till at the distance of eight months, when he applied a  
 “ blister to the under part of his breast ; the pain of  
 “ which, when taken off, occasioned fainting, with slight  
 “ convulsions.”

Whytt Works, 4to. Ed. p. 643. An. 1768.

6 “ And it is therefore that sailing, of all other modes  
 “ of gestation, is the most effectual in pneumonic cases,  
 “ as being both the smoothest and most constant.”

Cullen first lines, § 914. Ed. 4. An. 1784.

7 “ Even sea sickness is often beneficial to the con-  
 “ sumptive, as well as the sea air. Impaired digestion,  
 “ and not seldom a redundancy of bile, attends these  
 “ cases ; and perhaps repeated mild emetics, sufficient to  
 “ cleanse the first passages, would often be of use.”

Fothergill Med. Obs. & Inq. vol. 5. p. 369. An. 1776.

“ The



disposed to attribute the benefit received, in a great measure, to the effects of sea-sickness, rather than to the air of the place where they resided. If I can make this evident to the reader's satisfaction, I conceive it will be the greatest confirmation of the safety and efficacy of the method I have been inculcating, that can be produced; I shall therefore, with his permission, consider the matter somewhat in detail.

Authors who have written upon the subject of sea voyages, have supposed their good effects were produced by the patient's constantly inhaling balsamic and refinous particles, with which the air is impregnated from the ship and her equipage; (that is, to the smell of pitch, tar,

“ The benefit the constitution receives from sea sickness, is, that the tone of the solids in every part, is wound up to a greater degree of tensity, springiness, and vigour; and the obstructions of the stomach and several viscera are intirely resolved, which, if timely undertaken, recovers any decay before it can gain a firm settlement in the habit.”

Robinson on Consump. p. 46. An. 1727.

S

and

and turpentine) and also by the exercise of the ship's motion. All this is merely imaginary. Whoever has been at sea must know, that there is not near so much exercise as in a carriage, and when the motion becomes familiar, which it does in a short time, there is scarce any at all. As to the atmosphere being loaded with certain particles arising from the vessel; if we consider the free circulation of air, the wind perpetually blowing, whatever may arise, away from the vessel, and the largeness and cleanness of the apartments; the matter that flies off from the ship or her rigging, must be so very thinly dispersed, that no possible effects can be produced from their application to the diseased lungs.

In consequence of this mode of reasoning, it has been attempted to produce the same effects on shore. Consumptive persons have been placed in small rooms, in which certain gums and resins, supposed to be endowed with the property of healing ulcers, were burnt upon hot iron. The  
atmosphere

atmosphere being thus loaded with the smoke and vapour, the patient breathed in it for a certain time every day, and it is said <sup>8</sup> with advantage. This is reasoning from analogy, and drawing conclusions from false premises. Gums and balsams applied to the external ulcers, are said to cure them; and therefore similar particles applied to ulcers in the lungs, will cure them also. But gums and balsams do not cure external ulcers; the best surgeons expecting no more from external dressings, than merely defending the part from the air and bandages; for that purpose, the Ceratum Album is better than the Balsam of Mecca; and there is no degree of similarity between the two diseases, the cause, the continuance, and the process of cure being totally and diametrically different.

Various other steams from mineral and vegetable substances have been used upon the same principle <sup>9</sup>; but so far as I can judge

<sup>8</sup> Mudge on the Catarrh, p. 133.

<sup>9</sup> Bennet Theat. Tabid. uses fumigation with vegetables, turpentine, orpiment, &c. p. 167.

judge from experience, and I have seen them tried for a great length of time, they produce no relief; on the contrary, they for the most part increase the cough, by the heated air stimulating the inflamed lungs. One constant effect of these applications, is quickening the respiration, which ought at all times to be carefully guarded against.

When people first go to sea, they are, with few exceptions, sea sick, which continues many days, in some, the whole voyage; but after a short time, only in

Willis, sect. 1. cap. 11. uses fumes of sulphur and arsenic.

Ob eandem quoque rationem novi fumum ex *balsamo tolutano*, more *tabaci*, per tubum commodum in pulmones inspiratum usus fuisse eximii, præcipue in sanguinis sputo.

Mead. Monita et Præcept. Med. p. 53. An. 1751.

Wintringham, § 306. In hæmoptoe from obstructed menses, recommends astringent vapour to the lungs.

An. 1782.

Theod. Turq. de Mayerne. An. 1638. uses fumes with G. Olib. & Flor. Sulph. smoaked like tobacco—Sloan MSS. Brit. Mus. See the prescription in page 151 of this work.

the

the morning, when they first stand in an erect posture; for during its utmost violence, after the first day, they are rarely sick when lying horizontally.

To this sickness I attribute the success of sea voyages in Phthisis. For though it is of all sickness the most violent and distressing, often straining the patient till pure bile is pumped into the stomach, and discharged, thereby occasioning obstinate costiveness; yet their appetite remains good, their spirits light and chearful, they get flesh, and are evidently in perfect health. I have seen many people, some of them I have accompanied in voyages of considerable length, who were constantly sick when it blew hard, even when the ship was at anchor; and though they were subject to this for years, yet their health continued unimpaired. This I consider as a positive proof, that vomiting may be repeated frequently, and persisted in to any length of time, without injury to the stomach or general health; for sea sickness is more violent than the operation



operation of any emetic medicine I ever saw given.

The general objection to the frequent use of medicines that excite vomiting is, that they weaken the stomach, destroy its tone, injuring its coats and the appetite. Surely if it can be continued violently for years, without producing any of these effects, is it reasonable to suppose, that being produced in the gentle manner we have recommended, will be attended with danger? It being of importance to obviate this idea, I shall produce the authority of others in defence of the practice, that it may not rest upon my single assertion.

In the case quoted from Whytt, before the patient went to sea, vomiting or purging in a gentle manner was almost sure to bring on fainting fits. But during a voyage of four or five weeks, *he vomited much every day*, and purged frequently, and yet he had neither faintings, nor weakness in his stomach and bowels. After this voyage he remained well for eight weeks.

In

In the cases published by Gilchrist, (who has written expressly upon the subject) the patients were generally sea sick, and vomited much bile; and in some the good effects ceased when they became familiar to the ship's motion, and were no longer sick. He relates the case of a consumptive patient, who went to sea three times, the distance ten leagues each time; he was always sick, vomited bile, and was cured. The Doctor supposes the benefit his patient received, arose from the exercise, and breathing a pure air, impregnated with saline and bituminous particles. The voyage lasted but five or six hours each time, and will any person suppose, that was sufficient to perfect a cure, however the air might be impregnated? Is it not more reasonable to suppose it arose from the effects of the sea sickness? The stomach was cleared, the matter ejected from the lungs, the biliary obstructions removed, and the digestive faculties restored; good chyle being produced, the body was nourished;

rished; and health was recovered, the cause of the disease being removed.

I have been informed by a gentleman<sup>10</sup>, whose abilities and philanthropy are highly respected in an illustrious assembly, that a few years since, (November 1778) having a violent cough which prevented his lying down for many nights, attended with fever and inflammation on his breast; he was ordered by his physicians, after his illness had continued a month, immediately to quit the kingdom, and seek relief in a warmer and softer climate. Accordingly he embarked at Dover for Calais; the weather was stormy, and during the passage, which lasted about three hours, he vomited violently and almost incessantly. After landing, much fatigued, he went to bed, slept soundly all night, and next morning to his great surprise, found himself almost perfectly free from his cough,

<sup>10</sup> G— D—, Esq; M. P.

The fits of coughing were so severe, that he often dropt down, deprived of sense and motion.

and

and every other complaint, save the fore-  
ness occasioned by the continued vomiting.  
He pursued his journey to Orleans rather  
for pleasure than health, and remained  
well. I surely need not appeal to the  
reader's candour to say, from what cause  
this sudden cure was effected? It appears  
as evident as any proposition can do, that  
by the vomiting, whatever matter in the  
lungs occasioned the cough and other  
symptoms, was discharged, and the cause  
being removed, the effect ceased, and  
health was restored.

Vomiting is produced by the stomach  
being thrown into convulsions. Let this  
be done either by the motion of a ship, or  
the stimulus of emetic medicines, the ef-  
fects will be precisely the same, in pro-  
portion to the continuance of the opera-  
tion. In the course of the complaint just  
related, the patient had taken nauseating  
doses of emetic medicines, which some-  
times made him retch, but very slightly,  
and without relief. Had they operated as  
violently as the sea-sickness, it is probable  
the

the effect would have been similar, though not in the same degree.

In violent affections of the breast it would seem, from this case, that vomiting should be continued proportionally long to effect a cure. But this may be done when weaker efforts do not produce the desired relief. Perhaps a viscid tenacious phlegm, similar to that producing what has been termed bronchial polypii, may occasion these obstinate complaints. But as the agitation of sea-sickness penetrates every part of the body, in a manner superior to the action of any emetic that is ever given in regular practice, it may remove obstructions in the abdominal viscera, that would not yield to any other remedy<sup>11</sup>.

Every thing that is uncommon, to which people are not accustomed, appears surrounded with difficulties. In this light will be viewed a sea voyage by those who

<sup>11</sup> “ Commotio denique, quæ in navigatione excitatur, vim habet helleboro levi et albo persimilem.”

Oribas. Med. Collect. lib. 6. cap. 23.

have



have never seen salt water; but, on a nearer inspection, it will be found, to be as easily accomplished as a journey to Bristol, or any part at a distance. A trial might be made in any of the vessels that are constantly going backwards and forwards, to the western coast of England. And now that peace has shed its benign influence over Europe, the ports of France are accessible by the packets in a few hours. In the summer, the northern trade offers opportunities every day, and vessels are frequently going to Holland and Germany.

If these excursions are attended with relief and abatement of the symptoms, it may induce the patient to make a voyage of greater extent. It has of late years been the custom to send consumptive persons either to Lisbon by sea, or to Nice (after landing at Calais) by land. Setting the journey by land out of the question, I think they are both exceptionable. At Lisbon the weather is generally very hot in the day, and a keen cold easterly wind takes place in the evening, which being  
the

the very thing he fled from, is sufficient to deter the patient from taking up his residence there. At both places, the accommodations are so different from those in England, that they become more than inconvenient; and the few that return cured from these countries, gives no great proof of the salubriety of the climates.

The atmosphere at sea, when agitated by moderate winds in a temperate southern climate, is the purest that can be found on the face of the globe; and, I believe, it will be allowed, that health may be enjoyed better at sea, than on any part on shore. A late celebrated, and much lamented, circumnavigator proved, that the scurvy was not a necessary consequence either of the food, confinement, or sea air; but depending upon certain local circumstances, which is always possible to be avoided. For the number who died during that memorable voyage, although they passed through all the climates in the world, were fewer, respecting the  
number.

number of the crew, than is admitted by the best calculation to die in the healthiest spot in Europe <sup>12</sup>.

From these considerations, and it being

<sup>12</sup> Capt. Cook with 118 men, performed a voyage of three years and eighteen days, through all the various climates, from 52° North to 71° South latitude, with the loss of one man only.

It is computed that in Madeira one dies out of 50 ann.

In the Pais de Vaud in Switzerland one in 45

In England on an average about one in - 25

In Madeira he would, therefore, have lost Seven men in the three years.

In the Pais de Vaud something more; and in England *fourteen*.

“ From these accumulated proofs, this proposition  
“ seems evident. Indeed so pure and untainted is the  
“ atmosphere at sea, from being duly ventilated by re-  
“ freshing winds, that it becomes the undoubted asylum  
“ for health in sickly climates, and during the rage of  
“ epidemical or pestilential diseases at land.”

Lind on Fevers, p. 219. An. 1774.

“ Illa autem quæ fit procelloso in mari jactatio ro-  
“ bustissimum hominem, non assuetum, vertigine, vo-  
“ mitu, anxietate intolerabili, ipso animi deliquio affi-  
“ cit: hinc casu aliquando morbos inveteratos sic sanari  
“ novimus.”

Van Swieten Com. in Boerhaave. Tom. I. p. 34.

necessary,

neceſſary, there ſhould be an object in view to occupy the mind, I conceive the longer the voyage, and the ſhorter time they are on ſhore, the greater will be the probability of ſucceſs. The coaſts of the Mediterranean promiſe a fund of amuſement to the mind tinctured with claſſic learning. The time at ſea is ſufficiently long; the veſſels employed in that trade, perfectly commodious, and containing every requiſite neceſſary; the patient would breathe the ſoft balmy airs of Italy, and feed upon its delicious fruits. There they might make excuſions on ſhore, and admire the noble remains of antiquity, to be met with in almoſt every part: but the ſhip ſhould be the place of their reſt; to her, like her great prototype, they ſhould return every night as to their home. Italy is delightful in many reſpects; but the accommodations for the night, eſpecially to Engliſhmen, are not among the number. In the firſt edition of this Eſſay, when treating of ſea voyages, I mentioned Madeira “as better (than Liſbon) being at a greater  
“ diſtance,

“ distance, more to the southward, and  
 “ the air, from its insular situation, purer  
 “ and infinitely more healthy.” This re-  
 commendation I was induced to give, from  
 some information I had received from a  
 medical friend, who had sent Phthifical  
 patients to that island with success; and  
 from what had been said on the subject  
 by a late eminent physician, whose exten-  
 sive correspondence gave him many oppor-  
 tunities of being well informed of the  
 degrees of health in different countries <sup>13</sup>.  
 The length of the sea voyage which he ob-  
 jects to, I esteem, and it probably in the  
 successful attempts has proved, of the most  
 material benefit. But conversing with  
 intelligent persons, who had lived in the  
 island, I was not a little surpris'd to hear,  
 that it was believed to be particularly pre-

<sup>13</sup> “ Of all the places we are acquainted with, perhaps  
 “ the island of Madeira enjoys the most equal tempera-  
 “ ture; but the voyage and other circumstances attend-  
 “ ing it, afford very formidable objections.”

Fothergill on Consumption, Med. Obs. & Inq. vol. 5.  
 p. 368. An. 1776.



judicial to the consumptive. It therefore became a necessary part of my duty, to give the public such information as should determine which of the opinions was to be received, which rejected. For this purpose, I wrote to a respectable physician, who has practised many years in Madeira, and he has very obligingly given me his sentiments upon the subject; by which it appears, that Madeira is by no means a proper station for those in a pulmonary consumption (particularly in the advanced period of the disease) to remain at<sup>14</sup>.

Whenever

<sup>14</sup> Extract from Dr. Gordon's Letter, dated Madeira, April 28, 1784.

“ Sir John Pringle, and some others of my medical  
“ acquaintance in London, did me the honor about eight  
“ or nine years ago, to send some of their consumptive  
“ patients under my care, of which few recovered; and  
“ I was induced to discourage them from sending any  
“ more to our island, especially as the generality of these  
“ cases, are in the last stage of the disease before they  
“ leave Britain. And unless they are particularly re-  
“ commended to some British merchant's house, they  
“ have no alternative, but to take up their quarters in a  
public-

Whenever the patient has got the better of sea-sickness, or when they are not at first affected by the motion of the ship; I would recommend that they should be made to vomit every morning, or oftener, as the urgency of the symptoms may indicate; and to guard against costiveness by any gentle opening medicine; when the sea water can be taken, nothing is more

“ public-house, which are very indifferent in this place,  
 “ and by no means calculated for their reception. No  
 “ pecuniary consideration whatever will induce the na-  
 “ tives to accommodate Phthifical patients. Our provisi-  
 “ ons in general are not bad, though it is often difficult to  
 “ procure proper diet for the Valetudinarians, by having  
 “ no kind of market established. Our roads all over the  
 “ island are very indifferent, and not shaded. The so-  
 “ ciety is very good for those in health. A great scarcity  
 “ of asses milk, and no such thing as nurses, or proper  
 “ people to attend the sick. Add to all these objections,  
 “ I am of opinion, that *our air is too fine and penetrating*  
 “ *for hectic complaints*, and should imagine the south of  
 “ France a much better climate, or even the Highlands  
 “ in some of our West India isles. Am sorry the situa-  
 “ tion of Madeira will not permit me to give you better  
 “ encouragement on the propriety of sending consump-  
 “ tive patients here.”

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proper.

proper. In vessels that are used in the commerce with the Mediterranean, they may be supplied with every necessary, except vegetables, equal to what they can have on shore.

The instances in which sea voyages have been tried, being usually desperate cases, and consequently often failing of success, should not be admitted as an argument against their propriety. But whether patients are to be sent into the country, to sea, or to foreign parts, still it is essentially requisite that they should be sent early in the complaint; before the lungs are greatly injured, before the body is emaciated, and whilst there remain *stamina vitæ* sufficient, not only to support the fatigue of the journey, but to afford a reasonable expectation of a recovery. That this is not attended to, as its importance merits, is evident from the means so generally proving ineffectual; this fatal neglect of applying proper remedies in time, is the reason that the disease so often terminates fatally; and not,

as

as we have before observed, that it is in its own nature incurable. Let not the reader accuse me of repetition, when I again urge this argument; for it appears to me so indispensibly requisite, that a consumptive patient ought to have a starling hung in his room, and taught to speak incessantly, *principiis obsta*, and nothing else.

The patient is usually far advanced in the disease, before the physician is consulted. They have loitered away their time in using family nostrums, and oily, greasy emulsions, till it is beyond the power of art to save them from the grave. There is no malady more replete with danger than Phthisis Pulmonalis, and that danger is greatly augmented by its becoming familiar, from its frequency. It steals upon the patient under the insidious appearance of coughs, colds, and rheums, of which this variable climate of ours, is so productive: and when they, and their friends, so far from suspecting danger, imagine they are getting better, hear with

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astonishment,

astonishment, that they are past recovery. This is a matter of such vast importance, that if I could only put people on their guard, and quicken their apprehension of danger, I should think my time had been usefully employed on this subject.

From whatever method of treatment the symptoms of the disease begin to abate, it is particularly necessary to persevere with unwearied diligence; as a small relaxation may reduce the patient to his former point of danger. Even when every symptom has disappeared, and the cure is perfected, it will be proper to continue in the plan of diet for some time, and to return with cautious steps to his former manner of living. This, in some constitutions, can never be done with safety; the disease in a peculiar manner, leaving a tenderness, and a disposition to its return in the habit; rendering them liable to get cold, and susceptible of every variation in the weather<sup>15</sup>.

The

<sup>15</sup> “ Omnis Phthisis recrudescente solet; et qui semel  
“ fuit



The most effectual means of restoring general health, and strengthening the constitution, after they have been injured and reduced by this, or any other chronic disease, is by living upon a nourishing, simple, spare diet, not exceeding in quantity or quality; breathing a pure, dry, ventilated country air; taking such exercise as can be borne without fatigue, particularly on horseback; and using the cold, or sea bath, with proper precautions.

“ fuit Phthificus, nisi accuratissimum regimen adhibea-  
 “ tur, vel à levissimâ causâ in eundem statum redit. Si-  
 “ quidèm non tantùm pulmones priori morbi insultu jàm  
 “ labefactati novæ impressiõnis eo magis sunt suscepti-  
 “ biles; verùm etiàm vehementior proclivitas, atque  
 “ dispositio in hunc morbum, ex ipsius corporis habitu,  
 “ in his quàm in aliis comperitur.”

Morton Phthisiol. lib. 2. cap. 6. p. 138. An. 1689.

## C H A P. XI.

*Gross living—effects of abstinence—vegetable diet—  
animal food—milk—testacea and jellies—warm drink  
—cloathing—large chambers—infection—conclusion.*

THE inhabitants of this country are reproached by their more elegant and refined neighbours on the Continent, with eating more gross animal food, than any other people in Europe; and the charge is so far well founded, that it is extremely difficult to persuade them, that any good can arise from abstinence. Even when ill, nourishing and comforting diet and drinks, are thought essential to the recovery of health. This is observed, not so much among the lower and middling class of society, as among those, whose education and superior rank might be supposed to have informed them better. Strong broths, jellies, wine-whey, &c. are

as

as regularly and constantly found in the chambers of the sick (where they can be procured) as if they imagined the labours of the cook more requisite than the advice of the physician.

When the body is disordered, the stomach, that faithful monitor in the constitution, by nausea and sickness, shews an aversion to food. In every animal, except the reasoning, this indication is never counteracted, and abstinence, the physic of nature, generally effects the cure. How far high living may occasion many of our diseases, is no part of my present enquiry; but there is no doubt, that it increases every symptom, and renders them more dangerous and difficult to cure: what then can be so absurd, so contradictory to common sense, as to pour down aliment, when the stomach revolts against it? Nothing, except drinking when there is no thirst<sup>r</sup>.

The

We are informed by the ingenious and accurate Abbè Spallanzani, that when he introduced food into the stomach of an animal that was not in health, the gastric fluid was incapable of digesting it. In such cases the  
food

The principle in the human body termed nature, has a wonderful power of restoring health, if left to itself, and no impeding cause introduced to the constitution. Many diseases might be cured by abstinence alone, persevered in for a sufficient length of time; but that abstinence must be something more than lowering the common diet, and avoiding high seasoned food, and spirituous liquors<sup>2</sup>. What I understand by abstinence, is taking as little food as will support life, and that of the plainest and simplest kind, com-

food remained till it became putrid; whereas in a healthy state the gastric fluid has not only the power of dissolving the food, but even, when putrid flesh has been taken into the stomach, in a short time the putrid smell and taste is corrected, so as not to be perceived.

See Dissertations relative to the Natural Hist. of Animals, &c. § 152. 249.—1784. Transf.

<sup>2</sup> Solaque abstinencia sine ullo periculo medeatur."

Celsus, lib. 3. chap. 2.

" I am firmly persuaded, that any man who will enter  
 " upon the constant practice of bodily labour, and of ab-  
 " stinence from animal food, will be preserved intirely  
 " from the disease" (the gout.)

Cullen first lines, § 540. Ed. 4. An. 1784.

posed

posed of particles the least heating and irritating: drinking only water; lying upon a hard matrafs, and rising early in the morning. I could adduce many instances of the recoveries this plan has produced. Perhaps the case most publicly known, is that of Wood, the miller of Billiracay in Effex, who, from a corpulent, and generally diseased habit, at the age of forty, became thin and perfectly healthy by abstinence and exercise alone. His food was pudding made of sea-biscuit and a little milk; drank sparingly of water; lay few hours in bed, and used as much exercise as his strength would admit of, without great fatigue<sup>3</sup>.

As the fluids in our bodies are perpetually circulating and changing; new chyle being constantly poured into the subclavian vein, collected by the lacteals and lymphatics; and the finer parts continually excreted by the sensible and insensible perspiration, the grosser by other emunc-

<sup>3</sup> Medical Transactions, vol. 2. 1772.



tories : by drinking only water, and living on a vegetable diet, merely sufficient to support the strength ; these fluids will in time be intirely renewed, their quality and disposition totally changed. The parts of the body which had been injured by disease, or intemperance, will recover their natural state, and health be restored. I am of opinion, that where a sufficient degree of vital strength remains in the constitution, and the digestive faculties are not destroyed ; few chronic diseases would resist a plan of this kind, strictly pursued for a sufficient time<sup>4</sup>. It is not to be expected, that when the limbs are rendered useless, the joints fixed, and the glands indurated ; that a spare diet will work miracles, and restore those parts to their original condition. But though it cannot

<sup>4</sup> On the whole, I think, the *lightest*, and the *least* food may be justly termed the shortest and most effectual *antidote*, and the most *universal remedy*, for all distempers of the body, and errors and mistakes of the *mind*, that depend upon, or have any relation to, the body, that the wit of man can suggest or invent.

Cheyne Dis. Body and Mind, p. 95. An. 1742.

be expected to perform a cure, it will do more towards it, than any other method of treatment, that I am acquainted with. The symptoms will be mitigated, and the disease rendered more supportable, which in such deplorable situations, is all that can be expected from art.

Such a plan should be entered upon with great caution and circumspection, all sudden changes being dangerous. For though there is a power in the human body, as in the mind, of accomodating itself to different and various situations: the inhabitants of the frozen north, enjoying health under the vertical sun of Africa; yet such transitions, if possible, should be made gradually. Regard must be had to the age and constitution, to the former manner of living; and when they have indulged freely in the pernicious luxuries of the table, let them retrench by degrees, till they descend to the point, it may be proper to remain it.

The change in the constitution being produced slowly, and imperceptibly, patience

tience and perseverance are absolutely necessary. It is not a week, nor a month, but sometimes years, that are requisite to restore a habit broken down by disease and intemperance. *Gutta cavat lapidem non vi, sed sæpe cadendo.*

Much depends upon the regulation of diet in every disease, but in none more, than where the lungs are injured. For they not only participate with the body in general, but are particularly liable to suffer by their vicinity to the stomach. In such cases, the usual practice has been to abstain intirely from animal food ; and in general it is judicious and proper. During the inflammatory period of the complaint, when the fever is continued, and before the tubercles are advanced, or matter secreted in the lungs ; a vegetable diet, with milk in any form it will agree with the stomach, is to be preferred. Sago, barley, millet, and rice, make an agreeable variety, and ripe fruit may be indulged in at pleasure. Thames flounders and  
small

small whittings may be taken occasionally, without prejudice.

In the advanced period, when purulent matter is spit up, and the hectic fever, with remissions and morning sweats completely formed; I have thought a small portion of animal food taken for an early dinner, has sometimes produced a good effect. It should consist of chicken, or weak broth, from lamb or veal, in preference to beef or mutton. But as there is always a certain degree of inflammation subsisting in the lungs, it is very apt to increase the heat and fever, and therefore requires great attention.

Jellies of calves feet, hartshorn shavings, and isinglass, are universally recommended as restoratives to the weak and infirm. Being made from the most viscid parts of animals, and by long boiling, their most volatile particles dissipated, they are not only liable to the same objections with animal food in general, but I very much doubt of their possessing any nourishing property. A certain quantity of wine is  
always

always a part of the composition, and generally that is not a little; they are therefore most improper diet for the consumptive, where it becomes necessary to be particularly guarded against cordial and nourishing messes.

Milk is a mi'd, soft fluid, requiring little force to be assimilated into nourishment; as it becomes the principal part of the diet, it should be taken in such a manner as is most agreeable to the patient. Sometimes cows milk forms too dense a curd to be readily dissolved in the stomach; in such cases, runnet-whey, may be substituted, or what is much better, asses milk; but it should be drank as food, to the quantity of two or more pints in a day. The lightest and best of this class is womens milk, sucked from the breast, and where it can be complied with, is superior to every other diet. There are instances related of its curing without the assistance of medicine, even in the last stage of the disease. In a work on this subject,

“ Novi autem quemdam, qui quum toto anno ipsum et  
“ bibisset,



subject, published in France, two cases are given of the disease being perfectly cured by the patient's sucking healthy women. But one of the nurses did not long survive;

“bibisset, et comedisset (lacte,) interim cum frumentaceo  
 “aliquo, aut similagine, aut libo suminali, aut alica, aut  
 “lente, aut panico incoquens: quumque ita agendo a  
 “vino abstinuisset, liberatus fuerit, & puris sputo, et ne  
 “postea in phthisin inciderit. Tantum etiam de sangui-  
 “nis rejectione dictum a nobis sit: putoque abunde  
 “sufficere.” Alex. Trall. lib. 7. cap. 1.

“Nihil ad hæc omnia lacte videtur esse præstantius,  
 “præcipue quidam si quis muliebrem mammam ore ap-  
 “prehendens id ipsum mulgere toleret.”

Galen de Marcore, cap. 9.

“Itaque lac muliebre primum locum obtinet, secun-  
 “dum vero asininum. Verum quoniam ægre nonnulli  
 “hoc assumunt, caprillum ipsis dandum est, quod me-  
 “dium fere existitit, et magis potest nutrire.”

Alex. Trall. lib. 12. cap. 4.

“Si quis Phthisicus multum lactis potet, nullo alio  
 “eget auxilio.”

Aretæus Cap. de Morb. Chron. lib. 7. Ed. Ox. 1723.

“Lac animale, ut princeps nutriens, humectans, de-  
 “mulcensque, et quidem Humanum ex ipsis uberibus  
 “suctum; quippe quod homini maxime sit affine, ac mi-  
 “nimis viribus degerendum.”

Wen. Trnka Hist. Feb. Hæcticæ, p. 351. An. 1783.

Robinson on Consumption, part 2. p. 148. An. 1727.

which

which might proceed, not from infection, as the author asserts, but from inanition; as it is very common for weakly women to fall into a general consumption by suckling their children too long. Had the disease been infectious, the effects would have appeared at the beginning, when the expectoration was copious, and the breath loaded with particles of pus; but it was sometime after the patient recovered, that the woman fell ill. It would therefore appear, that the patient being stronger than infants, a greater quantity of milk was secreted than the strength could bear, the consequence was weakness and decay, as in every other case of great discharge<sup>6</sup>.

The common practice of mixing rum or other spirits with milk, cannot be too strictly guarded against. It is a vulgar error, that has become so general, as to require great care to prevent. Butter-milk, from its accessant quality, is cool-

<sup>6</sup> M. Fournier de la Fièvre lente ou Héctique.

An. 1781. Dijon.

ing;

ang, nourishing, and refreshing, it may be drank ad libitum.

Milk mixed with conserve of roses, raspberries, and other preserved fruit, when the fresh cannot be procured, will prove an agreeable change. Ice cream is grateful; and not a contemptible medicine, especially when there is a disposition to hæmoptoe. In the convalescent period, milk may be mixed with mineral waters, or lime water, as the symptoms may indicate.

Oysters, muscles, crawfish, and other testacea, are usually admitted into the diet of the consumptive. Their qualities are nearly equal, and are among the tenderest of animal foods; if they agree with the stomach, they may be taken occasionally, as a variety.

It is to be carefully observed, that the quantity of food should be, not what the patient can take, but the smallest they can subsist upon; and that should be of parts the softest, and most easily dissolved. The great object in regulating the diet of

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weak

weak people, is to guard against their taking too much at a time ; for food oftener disagrees and is hurtful by the quantity, than by the quality. In the advanced period of Phthisis, this is a matter of the greatest importance ; for as the appetite is sometimes preternaturally keen, the patient and his attendants think they cannot eat too much. In such cases, a small quantity should be taken at a time, and repeated frequently ; more than half a pint will be improper.

The drink in every period of the disease should consist of water, the lightest and softest that can be got, with toasted bread infused in it ; or what is better, boiling water poured upon hard toasted bread, and let stand till perfectly cold ; the animal and vegetable matter, more or less in every kind of water, will, by this means be precipitated, the rawness of it removed, and some degree of nourishment communicated. Distilled water, when it can be procured, being lighter than any other, is greatly to be preferred, not only as being  
pleasant,

pleasant, but its medicinal quality I consider of great importance in the cure of chronic diseases. Milk and water, runnet-whey, and lemonade may be taken for a change. In summer, when there is a variety of ripe fruit, their juice mixed with water, makes an agreeable and elegant beverage. But when the patient is indulging with ripe fruits, attention must be paid to the state of his bowels, and the first tendency to a diarrhœa assiduously guarded against.

In almost every kind of illness, it is the custom to give the patient whatever he drinks, warmed; and in complaints arising from cold, hot suppings are esteemed a sovereign remedy. I have often thought this an improper practice, that militated equally against the just principles of physiology, and common sense. We give saline and neutral medicines cold, to abate heat, inflammation, and fever; but the barley-water must be made as hot as the patient can drink it; into such absurd contradictions are we led, by neglecting



reason, and blindly following custom and habit. Warm liquids are supposed to produce perspiration, the general cure for every ill ; but they much oftener have a contrary effect, by augmenting the heat and dryness on the skin. In continued fevers, cold drinks are wonderfully grateful and refreshing to the sick ; and in general, I believe, they will be found most useful, particularly in diseases of the lungs. The *fervida potio* is strongly recommended by Baglivi for resolving pulmonary obstructions, but I have never seen them of any use.

Wine, spirits, and fermented liquors of all kinds, however diluted, and however anxiously longed for, must be rigidly forbidden. They raise the spirits, and relieve the languor and faintness always attending morning sweats ; but they infallibly increase the succeeding fever, and aggravate every symptom.

To those unacquainted with the chambers of the sick, such regulations may probably appear trifling, and unnecessary ;  
but

but they who see, and know how sick people are dieted; know that upon such trifles their well-being depends. In vain the physicians may assiduously watch the symptoms and changes in the disease, and prescribe the most powerful and efficacious medicines, if the nurse is permitted to pour in strong indigestible broths, and high-seasoned hashes, in his absence.

I cannot too strongly inculcate the necessity, of the greatest attention to diet in every period of the complaint. Diet alone, without the aid of medicine, will go great lengths in the cure; but there is no medicine, nor any other remedy that has yet come to my knowledge, capable of producing any permanent relief, without a strict regulation of diet. And however severe such restrictions may appear to the patient or their friends, who have been accustomed to fare sumptuously every day; they may be assured, and I say this with full confidence, that so far from being starved, as they so much apprehend, a  
short

short trial will convince them of its powerful and good effect.

Persons of a delicate habit of body, and who are liable to complaints in the breast, should be cautious in changing their cloaths from winter to summer. Indeed, in this climate, where the weather is so variable, the less alteration that is made the better. A learned author supposes the imprudent changing of garment, destroys more than the plague, famine, or the sword; one would think the ladies dressed in those days as now; wrapping themselves up in the day, and exposing their persons to the cold, damp night air. The manner of dressing young people is sometimes the cause of pulmonary complaints; all pressure and tight lacing is injurious<sup>7</sup>.

When the patient's situation will admit of choice, it will be proper to lie in a large

<sup>7</sup> " Very straight lacing, and straining for a fine shape, hath made many a fine girl spit blood, and ruined the lungs, by preventing a full and easy respiration."

Huxham on Pleurisie, p. 234. An. 1757.

chamber,

chamber, well ventilated, with the chimney open, and at all times of the year the bed curtains not drawn close. In amplo conclavi tenendus æger<sup>8</sup>. This advice should always be had in remembrance, especially in pulmonary complaints.

Authors have supposed this disease to be infectious, and communicable in the same manner as other contagious fevers, by the perspiration and breath<sup>9</sup>.

<sup>8</sup> “ Etiam amplo conclavi tenendus, quo multum et  
 “ purum aerem trahere possit ; neque multis vestimen-  
 “ tis strangulandus, sed admodum levibus, tantum  
 “ velandus est.”

Celsus, lib. 3. c. 7. (Ed. Wedelli. fl. A. D. 33.)

<sup>9</sup> “ Periculosum præterea est, consuescere his, qui tabe  
 “ tenentur, atque in totum cum omnibus qui putridum  
 “ adeo expirant, ut domicilia in quibus decumbunt, gra-  
 “ viter oleant.” Galen. de Feb. lib. 1. cap. 3.

“ Contagium etiam hunc morbum propagat. Hic  
 “ enim affectus (uti frequenti experientia observavi) lecti  
 “ socios miasmate quodam, sicuti febris maligna, in-  
 “ quinat.” Morton Phthysiol. p. 70. An. 1689.

“ Certe juvenis ille, cujus modò mentionem feci, infe-  
 “ cit sororem et ancillam, quæ ipsi in morbo assidue  
 “ ministraverat.”

Vansvieten Com. Tom. IV. p. 64. § 1206.

I am

I am not of this opinion. Perhaps in the last stage, when the remaining portion of the lungs are deluged with purulent matter, particles of it may be exhaled by the breath, and if received into the lungs of an healthy person, the disease may possibly be in that manner generated. It will, however, be prudent to guard against it, by preventing children and young persons, who are most apt to receive impressions of this kind, being much about the sick, particularly not to let them sleep in the same bed, nor even in the same chamber if it can be avoided.

I have now gone through the several heads proposed in the beginning of this Essay; in the course of which, I have been less solicitous of writing well, than writing intelligibly. I have endeavoured to unite perspicuity with brevity, by avoiding common-place trite observations, and useless digressions. Many errors and repetitions I am sensible will be perceived; but should the practice recommended, be found useful, in a disease, hitherto, when confirmed,



confirmed, ranked among the incurables : I have no doubt the intelligent reader will pass them over with that liberality always accompanying learning and abilities ; regarding the intention, rather than criticising the execution.

**TO CONCLUDE.** From considering this subject for many years ; observing with careful attention such cases as have occurred in my own practice, and missing no opportunity of examining the bodies of those who have died of the disease ; I am of opinion, that a consumption of the lungs, if taken in time, that is, before the strength is greatly debilitated, the lungs reduced in their substance, or the digestive powers rendered incapable of assimilating nourishment, is as curable as any other disease of the viscera. But if the patient, or those having the charge of them, will defer seeking assistance ; or when called, neglect the advice given, till the disease is too far advanced ; and spend that time in swallowing family nostrums, and useless nauseous medicines, that might be employed

ployed in following the best advice they may be capable of procuring; are we to be surpris'd, that a disease, in itself always full of danger, should so frequently terminate fatally.

PRINCIPIIS OBSTA, SÈRO MEDICINA PARATUR,  
CUM MALA PER LONGAS CONVALUERE MORAS.

Ovid.

## A P P E N D I X.

*The opinions of Physicians, ancient and modern, on the use and effects of frequent vomits ; and some instances to shew, that they are the only means of relief in certain disorders of the contents of the thorax.*

THE very indulgent reception which the first Edition of this Essay, with all its imperfections on its head, has received from the public, deserves my warmest acknowledgements. And I embrace with much satisfaction the opportunity granted me, not only of correcting it to the utmost of my power, but also of answering such objections as I understand have been publicly or privately made, to the doctrine there laid down. Those have been confined to two general heads. The difficulty that will be found in prevailing upon patients

tients to persist in a course of vomiting for the time requisite for the cure ; and the apprehension that the stomach will be injured by the frequent repetition of the operation.

When patients are convinced of their danger, and have a confidence in their physician, they never hesitate to follow such direction as he shall think proper ; and if the propriety of those directions cannot be made evident to any person of common understanding, I should strongly suspect the principles on which they are founded. As to the continuance of any remedy, it will always depend upon the relief experienced ; when that is evident, the desire of life, implanted in every breast, will supersede any reluctance arising from the disagreeableness of the medicine.

That the stomach will bear vomiting for any length of time, without the smallest injury, has been clearly proved in the chapter upon the use of sea voyages. But as young practitioners may not be well acquainted with the general effects of this  
active

active agent in the human constitution, I shall produce some cases and authorities from names of such eminence in the profession, as will, to the unprejudiced mind, be decisive in favor of vomiting in many different diseases, as well as in those affecting the contents of the thorax. In this deduction the reader will perceive, that the safety and propriety of vomiting every day in complaints of the breast, does not rest alone upon my assertion; for though it was not before used in Phthisis Pulmonalis, in the manner I recommend, yet in other affections of the lungs, it will appear to have been continued for several weeks, though upon different principles from those I have endeavoured to explain. The authorities I shall quote, will prove, that vomiting has been recommended by physicians in every age, from the days of Hippocrates to the present time. That the antients did not prescribe them so frequently as the moderns, does not appear to proceed from their disapprobation, but from the violent and unmanageable effects  
of



of the medicines they used for that purpose. Even in the last century, we find the learned Sydenham lamenting the want of an easy and safe emetic medicine, that might be given to children in every age.

The list of authors I could have extended with great ease; but I feared trespassing on the time of the experienced reader, for to him I do not presume to offer arguments, with which he must have long been familiar; and to others, they will probably be sufficiently numerous.

The stomach, situated obliquely downwards and backwards, nearly in the middle of the body, between the abdomen and thorax, is an organ, that, next to the brain, is of the greatest importance in the animal œconomy. The first and principal process of digestion is performed in it, not by trituration, according to the opinion of those who account for every operation in the human body upon mechanic principles; but by the matter being dissolved and macerated by means of the succus gastricus, secreted from innumerable glands  
and

and exhalent vessels, placed in its internal surface<sup>1</sup>. The digestion therefore depends upon the condition and state of these secretory vessels; and the nourishing, and even existence of the body, upon the process being rightly performed, so as to produce good chyle. Need we then wonder, that the ancients entertained so exalted an idea of the stomach, as to suppose the soul seated in it; or that the great and learned Lord Verulam, should familiarly, but emphatically, call it the father of the family!

In almost every disease arising from internal causes, and many from external injuries, the first symptom, the earliest indication of the body deviating from a state of health, is felt in the stomach<sup>2</sup>,  
by

<sup>1</sup> Spallanzani Dissert. on Nat. Hist. 1784.

<sup>2</sup> “ In all decays we generally perceive the stomach the first bowel affected, and with good reason, since it is the storehouse that ministers supplies to every individual nerve and fibre of the body.”

Robinson on Consumption, p. 128. An. 1727.

“ In all consumptive cases, nay, I might have added,  
“ in

by a nausea, sickness, or inappetency to food. Its influence is so great upon the body in general, that a late learned professor has observed, “ When the sto-

“ in all chronical diseases, it will be perceived, that the  
 “ stomach is the part that is affected, and nothing is  
 “ more reasonable, than that it should be so, since it is  
 “ the receptacle from whence every individual vessel and  
 “ fibre of the body has its supply of nutritive juices.”

Stephens on Consump. p. 140. An. 1761.

“ During inflammation of the stomach, a greater loss  
 “ of strength takes place, than in the case of almost any  
 “ other inflammation.”

Cullen first lines, § 386. An. 1784.

“ My third observation is, that the stomach; which  
 “ has so universal a consent with the rest of the system,  
 “ is the internal part that is the most frequently, and  
 “ often very considerably affected by the gout. The  
 “ paroxysms of the disease are commonly preceded by an  
 “ affection of the stomach; many of the exciting causes  
 “ act first upon the stomach; and the symptoms of the  
 “ atonic and retrocedent gout, are most commonly and  
 “ chiefly affections of the same organ. This observa-  
 “ tion leads us to remark, that there is a balance sub-  
 “ sisting between the state of the internal, and that of the  
 “ external parts; and in particular, that the state of the  
 “ stomach is connected with that of the external parts,  
 “ so that the state of tone in the one may be communi-  
 “ cated to the other.”

Ibid. § 802.

“ mach



“ tion of the nerves of the stomach or  
 “ intestines, from wind, acrid humours,  
 “ or other causes, whence the whole sys-  
 “ tem is often brought into consent. Nor  
 “ can it admit of any doubt, that hysteric  
 “ fits frequently proceed from this cause;  
 “ since the patients are often sensible of  
 “ their beginning with an uneasy sensa-  
 “ tion in those parts<sup>3</sup>.”

The sympathy of the stomach with the  
 other parts of the body, and its impor-  
 tance in the animal œconomy being appa-  
 rent; I shall proceed to shew, that among  
 the medicines acting chiefly, if not in-  
 tirely upon it, the principal of them, and  
 what produces the greatest and most per-  
 manent good effects are vomits.

In the early ages, the materia medica  
 was confined to a few articles, and those  
 often rough and drastic in their operation.  
 Probably this is the reason that emetics  
 were not so generally used, as in our time;  
 yet we find them recommended in vari-

<sup>3</sup> Whytt's Works, p. 493. 589.



ous diseases by every author whose works has escaped the ravages of time.

Hippocrates orders vomits, though not frequently<sup>4</sup>. Indeed, the idea, that every disease

<sup>4</sup> “ Vomitus commodissimus est, ex pituita ac bile  
 “ quàm maximè permixtus et non crassus valde, neq.  
 “ multus. Nam meraciores, deteriores sunt. Si verò id  
 “ quod vomitu rejectum est prasini fuerit coloris, aut li-  
 “ vidum, aut nigrum : quicumque horum fuerit colo-  
 “ rum, malum esse putandum est. Si verò omnes co-  
 “ lores idem homo vomit, valde perniciosum hoc est.  
 “ Celerrimam autem mortem significat lividus vomitus,  
 “ si graveolens fuerit. Omnes verò subputridi ac fœ-  
 “ tidi odores, in omnibus vomitibus mali sunt.”

Hippoc. Prænoteon. p. 404. Ludg. 1555.

“ Graciles et facile vomentes, sursum purgare oportet,  
 “ vitantes hyemen.” Ibid. Aphor. sect. 4. vi et xviii.

“ Quicumque ex pleuritide suppurati fiunt, si in qua-  
 “ draginta diebus repurgati fuerint, ab ea die qua ruptio  
 “ facta fuerit, liberantur. Si verò non, ad tabem tran-  
 “ seunt.”

Ibid. Aph. sect. 5. xv.

“ For by a vomit timely administered, the matter of  
 “ the imposthume is pressed out by the contraction of  
 “ the thorax which the vomit causes, and so the impost-  
 “ hume is cleansed, the matter of which would other-  
 “ wise rot farther in, and so cause an ulcer, and this a  
 “ consumption.”

Sprengell Com. on Hipp. Aph. p. 115. An. 1708.

disease would terminate by crisis on some certain day, precluded any attempt to remove it before that time, lest the concoction of the humours should be disturbed. Experience has nearly worn out this opinion, to which, the great difficulty, not to say impossibility of ascertaining in many cases, the first day of the disease, has not a little contributed.

Galen<sup>s</sup> is particular in his directions  
when

See also de Morbis. lib. 2. Pulmon. Morb. where he orders Veratrum (which was an emetic) to be drank by itself.

Friend Com. in Hipp. Morb. Popul. p. 39. An. 1717.

<sup>s</sup> “ At verò qui ægrè per superiora purgantur, ii,  
 “ nisi prius reddantur habiles, præparenturque ad vo-  
 “ mitum, minimè assumant veratrum. Præparabuntur  
 “ autem medicamentis vomitoriis mediocribus, nec non  
 “ cibo uberiori, et quiete. Etenim nos radículas ex  
 “ oxymelite propinavimus, quas arundine perforatas,  
 “ ac ramulis veratri albi transfixas, per totum diem at-  
 “ que noctem reliquimus. Atque ejusmodi ex elleboro  
 “ facta purgatio erit imbecilla. Verùm qui angustum  
 “ habent pectus, eoque etiam compressum, ineptissimi  
 “ ad purgationes existunt, quæ per vomitoria medica-  
 “ menta fiunt, ac potissimum per album veratrum: si-  
 “ quidem thoracis aliquod vas, ipsis rumpitur. At bilis  
 “ suprà,

when vomiting is proper or improper, and the preparation necessary to be observed before the operation. He cautions against vomiting those with narrow chests, especially with *veratrum album* (bear's-foot) lest a blood vessel should be ruptured. But we know that there is not the smallest danger of this accident happening, because there is no stress upon the vessels of the lungs, little or no blood passing through them in the action of vomiting.

Alex. Trallian<sup>6</sup> is more liberal in the use

“ *suprà, pituita per inferna vacuare debet. Est quando*  
 “ *contrario modo accidat, siquidem in ventriculo pitui-*  
 “ *tosus, biliosus autem in intestinis humor resideat.*  
 “ *Melancholicum verò semper per inferiora vacuare*  
 “ *oportet. Sic æstate quidem superiores ventres, hyeme*  
 “ *verò inferiores movere convenit, ut autor est nobis*  
 “ *Hippocrates : sed regiones etiam, anni temporis, ætatis,*  
 “ *consuetudinisque non exigua ratio est habenda. Si-*  
 “ *quidem qui (gratia exempli) vomere soliti sunt, faci-*  
 “ *lius purgationes ferunt per superiora : qui non assue-*  
 “ *verunt, haud citra periculum : magisque ex veratro.”*

Galen. Quos et quando Purg. Epit. Oper. Lugd. 1643.

“ *Sin autem affectus inveterascit, etiam vomitus*  
 “ *e radiculis raphani prodest.”*

Alex. Trallian, lib. 1. cap. 10. Edd. Alb. Hal. Lauf. 1772.

“ Quod

use of emetics, and orders them in a variety of diseases.

Aretæus<sup>7</sup>, one of the most learned and best informed among the ancients, orders frequent vomits in various diseases, viz. *Lienteria*, *Epilepsia*, *Elephantiasis Coeliaca*, &c. and in these cases not only as remedies, but he orders the weaker emetics as a preparation for the more violent, as hebebor when given with that intention.

Celsus approves of vomits rather in the winter than summer (contrary to the opinion of Galen) in bilious habits, when there is bitter eructations, with pain and weight in the præcordia, heat in the breast, &c. as by that means corrupted matter is

“ Quod si vero mulsam non libenter sumant, tepida  
 “ aqua ipsis liberalior dari debet, atque vomitus solici-  
 “ tari aut digitis, aut pennis anserum ex hydrelæo in os  
 “ inditis, donec corrupta abunde evacuata tibi esse vide-  
 “ antur.” Ibid. lib. 7. cap. 14.

He also recommends them in Cephalalgia and Hemicrania, lib. 12. in Epilepsy, cap. 15. in Melancholia, cap. 17. in Anorexia biliosa, lib. 7. cap. 5. in Cholera Morbo, lib. 7. cap. 14. and in many other diseases.

<sup>7</sup> Aret. Cap. Oxon. 1723.

expelled the readiest way. In pestilential and ardent fevers he vomits to purge the breast. And although he is no friend to vomits in diseases of the breast, yet he has recourse to them as a *dernier ressource* in slow fevers, “*Si non liberaverat, decoquebat aquam sale adjecto, eamque bibere cogebat, ut vomendo ventrem purgaret* <sup>8</sup>.”

From the scattered hints we find in historians there is great probability, that the Egyptians were in possession of a very considerable portion of medical knowledge. Authors of great reputation inform us, that they vomited and purged frequently,

<sup>8</sup> “*Vomitus utilior est hieme, quam æstate nam tum et pituitæ plus, et capitis gravitas major subest. Inutilis est gracilibus, et imbecillum stomachum habentibus, utilis vero plenis et biliosis omnibus, si vel nimium se replerunt, vel parum concoxerunt.*”

“*Qui vomere bis in mense vult, melius consulet, si biduo continuarit, quam si post quintum decimum diem vomuerit; nisi hæc mora gravitatem pectori faciet.*”

Celsus, lib. 1. cap. 3.

“*Si pituita in stomacho coit, inclinata jam accessione, vomere cogendus est; et tunc dandum frigidum olus, aut pomum, ex his, quæ stomacho conveniunt.*”

Ibid. lib. 3. cap. 7.

in



in order to preserve health, which they supposed was most frequently injured by superfluity, or improper quality of the food, and therefore to be remedied by evacuation and abstinence 9.

The judicious Morton <sup>10</sup> bears testimony,  
though

9 Singulis mensibus triduò purgant se, vomendo atque intestina diluendo, gratiâ sanitatis conservandæ.

Herod. l. ii. § 77. Ed. 1618—fl. 444 bef. Chr.

Morbos ut antevertant clysteriis et potabilibus quibusdam purgamentis, jejuniisque et vomitu, corpora medicantur.

Diod. Sic. Bibl. Hist. l. 1. p. 52. ed. Rhod. 1604. Diod.

fl. 6 years bef. Chr.

<sup>10</sup> “Maximi momenti est post extractionem sanguinis,  
“præcipuè autem si morbus à crapulâ ortum suum ducat; vel si nauseam, et vomendi dispositionem conjunctas habeat, *Emeticum* lenè præscribere è *Melle*, vel, *Oxy-  
ymelite scyllitico*; immò et aliquandò è *Vino Benedicto*  
“modicâ quantitate sumpto. A quâ vomitione, non  
“tantùm Ventriculus humorum saburrâ oppressus relevi-  
“vari, et nausea inde nata tolli, et digestio restituti possint, (quæ omnia non sunt flocci habenda;) verùm  
“etiàm moles humorum jam pulmonibus impactorum,  
“harum partium exagitatione inter vomendum, insigni-  
“tèr expectorari solet, unâ cum notabili relevatione  
“ponderis gravativi à mole istâ effecti. Atque hoc ritu  
“non tantùm plurimos *Empiricos* vidi, cum successu fe-  
“lici,

though reluctantly, to the good effects of vomits in incipient Phthisis; and in other parts of his works, he gives them in remitting fevers, and in the preparation for the small pox.

Willis is more liberal in his recommendation of this remedy; he orders emetics in the dropfy, epilepsy, convulsions, jaundice, &c.<sup>11</sup> “Evacuation by vomit is more  
“ violent than by stool, so if it be consis-  
“ tent with the strength of the patient,  
“ it doth more good in some cases than  
“ ten purges: for by this means, the pon-  
“ derous phlegm that sticks in the folds

“ lici, sese omnem incipientem Phthisin curaturos glo-  
“ riari, verùm etiàm ipse ego ratione, et experienciâ fretus  
“ sæpissimè Phthiseos incipientis progressum eodem modo,  
“ brevi temporis spatio, præpedivi.”

Morton Phthis. lib. 2. cap. 8. An. 1689.

<sup>11</sup> Willis Phar. Rat. p. 2. sec. 2. c. 1. et Ph. Rat. p. 1. sec. 2. c. 1. An. 1684.

The med. he used for this purpose were Vitriol, Tobacco, Briony root, Mezerion fruit, Nux-indica, Eggs of a fish called a Mullet or Barbell. Flower of Antimony, Crocus Metallorum, Mercurius Vitæ, Glass of Antimony, &c.

“ of

“ of the stomach, and which all other  
“ cleansers would slip by, is cleared away  
“ as with a besom; and so likewise the  
“ adjacent parts, as the pancreas, or sweet-  
“ bread, the mesentery, the spleen and  
“ liver itself are violently concussed or  
“ shocked, insomuch that all obstructions  
“ in them, together with all stagnations  
“ or settlings of the blood and humours  
“ whatsoever, are very easily removed by  
“ this kind of medicine. All strange fer-  
“ ments, wherever generated in the body,  
“ and also the deeper seminaries of dis-  
“ eases, are seldom rooted out without the  
“ administering of vomits; but especially  
“ in the distempers of the brain and  
“ nerves, the use of vomits is found to be  
“ very advantageous.---And for this rea-  
“ son chiefly it is, that great distempers  
“ are best cured by vomits, and scarcely  
“ without them.---But in the mean time,  
“ vomiting physic is not to be used by  
“ all people without any distinction. For  
“ in some the tone of the stomach is too  
“ loose and weak, and their constitutions  
“ so

“ so tender, that their spirits presently  
“ faint with vomiting, and their strength  
“ is enfeebled; some also have their bow-  
“ els endued with extraordinary retention  
“ of such sensible impressions as are made  
“ upon them; and though they are long  
“ before they can be made to vomit, yet  
“ their vomiting when once begun is not  
“ easily stopped; yea, through their fre-  
“ quent straining to vomit, they are ex-  
“ posed to great loss of strength, and of-  
“ tentimes swoonings too.---And then  
“ again, in respect that the superfluities  
“ or stagnations of the nervous humour  
“ are most easily cured by such evacuati-  
“ ons as these, the use of vomits contri-  
“ butes very much towards a cure in the  
“ gout, asthma, epilepsy, madness, and  
“ many other distempers that are account-  
“ ed great and herculean diseases, &c.”

The cautions of this learned and eminent author certainly demand serious consideration; but they will diminish greatly in their weight, when we reflect, that the vomits he used were of the draf-  
tic

tic kind, either preparations of antimony, mercury, vitriol, tobacco, &c. and these given in full doses, and that the emetic medicines we are in possession of are mild, gentle, and certain in their operation, especially where administered in small doses.

The great and learned Sydenham<sup>12</sup> was well acquainted with the good effects of vomiting, instances of which we find in various parts of his works. In treating of the cure of continued fevers, having ordered a vomit of Vinum Benedictum, he thus expresses himself: “After a nice  
“ view of the matter cast up by vomits,

<sup>12</sup> R. Infus. Croc. Metall. ʒvi. Oxymel. Scillit. & fyr. scabios, com. ana. ʒss M. f. Emet.

“ Sæpè miratus sum dum fortè materiam vomitu re-  
“ jectam aliquando curiosè contemplabar, éamque neque  
“ mole valde spectabilem, nec pravis qualitatibus infig-  
“ nem, què factum fuerit ut ægri tantum levaminis ex-  
“ inde senserint; nempe vomitu peractò, sæva illa symp-  
“ tomata (nausea v.g. anxietas, jactationes, suspiria luc-  
“ tuosa, linguæ nigredo, &c ) quæ et ipsos excruciant,  
“ et adstantes perterrefecerant, mitigari solent ac solvi,  
“ quòdque morbi reliquum est εὐθύμως tolerari.”

T. Sydenham. Oper. p. 21. An. 1705. Ed. 3.

“ which



“ which was neither much, nor ill, I often  
“ wondered how it comes to pass, that  
“ the sick should be so much relieved by  
“ it; for as soon as the vomit has done  
“ working, the violent symptoms, viz.  
“ the nauseousness, anxiety, restlessness,  
“ sighing, and *blackness of the tongue*, were  
“ commonly mitigated, which before af-  
“ flicted the sick and frightened the by-  
“ standers; so that the rest of the disease  
“ was very tolerable.”

This is a very strong evidence in favor of the general effects of vomiting upon the system, independant of the matter evacuated from the stomach, which, as in this instance, is very often “neither much, nor ill,” yet the symptoms shall greatly abate, and by a repetition be entirely removed. Sydenham was of opinion (and the same is generally received at present) that the good effects of vomiting were confined to evacuating the matter from the stomach, and therefore to be given chiefly in the beginning of fevers, when they were indicated by sickness and nausea.

fea. But he also orders them when called later, even on the twelfth day with success in stopping the looseness, when the patient was no longer sick: and observes, that when vomits were not given early, the disease did not terminate till a looseness came on. That is, the matter always contained in the stomach and intestines not having been removed at the beginning, by the increased heat of the body, becomes highly putrid and acrid, and stimulating the canal, produces its own expulsion, and thereby solves the disease, which was occasioned by its retention. He adds, “and now before I leave off  
“discouraging of vomits, I must acquaint  
“you, that it is by no means safe, at least  
“in this fever, to give vomits of Vinum  
“Benedictum to children, or any under  
“fourteen, no not in the least quantity.  
“It were to be wished that in the room  
“of this we had some safer medicine that  
“was as powerful, which might root out  
“the humour that always almost threatens a looseness at the declination of  
“the

“ the fever ; at least, that we had such a  
 “ one as would so alter the sharp humour,  
 “ that it could not occasion a looseness.  
 “ I have indeed been frequently at a  
 “ stand, when I have visited infants and  
 “ children in a fever, and have seen an  
 “ indication, which persuaded the use of  
 “ a remedy that would have cured them,  
 “ and yet I did not dare to order it, for fear  
 “ of the consequences ; but in grown people I have hitherto observed no hurt  
 “ proceeding from a vomit, if it were  
 “ given with the cautions above-mentioned <sup>13</sup>.”

What

<sup>13</sup> “ Hic autem loci, priusquam de Emeticis dicendi  
 “ finem faciam, prætereundum non est, omninò tutum  
 “ non esse (saltem in hâc febre) Vomitoria ex infus.  
 “ Croc. metall. parata puerulis, ullisve infra adolescen-  
 “ tiam constitutis vel minimâ quantitate exhibere. Op-  
 “ tarem equidem ut illius loco alia nobis tutiora, sed  
 “ satis interim efficacia suppeterent, quæ humorem hunc  
 “ in febris declinatione ferè semper Diarrhœam minitan-  
 “ tem radicitùs exterpere possit ; vel saltem ut medica-  
 “ mento aliquo idoneo acrem istam materiam ejúsque vim  
 “ corrosivam ita mutare liceret, ac retexere, ut commovere  
 “ Diarrhœam

What he wished for, we possess in the Rad. Ipecac. a medicine so gentle as to be given to children in every age with safety, though not possessed of the virtue of correcting the quality of the sharp humour in fevers; that can only be done by their expulsion, which it effectuates. But it would seem that Sydenham was either easily alarmed, or that his Ven. Bened. was particularly drastic and rough in its operation; for our preparations of antimony are given safely to children in the month <sup>14</sup> when properly dosed, and with the best effects; not only evacuating the contents of the stomach better, but with less nausea and sickness than the Ipecac.

“ Diarrhœam nequiret. Sæpiùs profectò mihi molestum  
 “ illud accidit, quòd ad infantes pueròsque febre correptos  
 “ accersitus, indicationem conspexi, quæ quidem medica-  
 “ menti usum suavit cuius ope extra periculum collocari  
 “ potuissent, quod tamen exhibere, veritus infœlicem  
 “ exitum, non sum ausus. Verùm in adultis nullam inde  
 “ noxam hæcenus observavi, modò cum cautionibus  
 “ prædictis Emeticum propinetur.”

T. Sydenham Oper. p. 23. An. 1705.

<sup>14</sup> See G. Armstrong Dis. of Children. An. 1777.

In

In complaints of the breast, Huxham<sup>15</sup> was used to order gentle vomits, “ But I  
“ have several times given an emetic in  
“ peripneumonies with great advantage,  
“ when the expectoration hath been sud-  
“ denly suppressed, and the difficulty of  
“ breathing greatly augmented; but it was  
“ when a proper quantity of blood had  
“ been drawn antecedently, and the vio-  
“ lence of the fever abated: but in such  
“ cases very little should be drank after  
“ it to promote the vomiting.---As a bas-  
“ tard peripneumony is commonly at-  
“ tended with frequent urgings to vomit,  
“ I think it pretty clearly hints to us the  
“ expediency of relieving nature that  
“ way; and accordingly I have often ex-  
“ perienced the good effects of gentle vo-  
“ mits in it, after some blood had been  
“ drawn off. A spoonful or two of Oxy-  
“ mel Scillit. or Vinum Ipecac. with a  
“ few draughts of mustard whey, or the  
“ like, are sufficient: a large quantity of  
“ any kind of liquor should not be drank.

<sup>15</sup> Huxham on Fevers, p. 204. 228. 109. An. 1757. Ed. 3.



“ This not only pumps up much heavy  
 “ pituita from the stomach and lungs, but  
 “ also by the concussion it gives the whole  
 “ vascular system, promotes a general at-  
 “ tenuation and fluxility of the humours;  
 “ and a stool, or sweat commonly succeeds.  
 “ The mighty cures in pleurifies, &c.  
 “ boasted of by Rulandus (a), and others,  
 “ with the *antimonial aqua benedicta*, were  
 “ greatly owing to its emetic quality; and  
 “ the famous Poudre des Chartreux (b),  
 “ or Kermes mineral, gained such high  
 “ repute in pleurifies, peripneumonies and  
 “ defluxions on the breast, in a great  
 “ measure at least, from the gentle efforts  
 “ it creates to vomit. Undoubtedly it hath  
 “ had good effects in catarrhal fevers, and  
 “ pituitous peripneumonies; but to give  
 “ either the one or the other in inflam-  
 “ matory peripneumonies, or pleurifies,  
 “ without previous bleeding, is utterly  
 “ wrong, dangerous, and empirical.”

This celebrated physician was fully con-

(a) Mart. Rulandi curat. empiric. passim.

(b) Mem. de l'Acad. R. des Sci. An. 1720.

vinced,

vinced, that vomiting was the only effectual evacuation in malignant fevers, and, indeed, the only one they would bear; for bleeding or purging reduced the strength below the power of medicine to restore. “ Besides, the pulse, in those  
“ cases, sinks oftentimes surprisingly after  
“ a second bleeding, nay, sometimes after  
“ the first: and this I have more than  
“ once noted to my great concern and  
“ astonishment, and that even where I  
“ thought I had sufficient indications from  
“ the pulse, &c. to draw blood a second  
“ time. So necessary is it therefore to  
“ have a due regard to the peculiar nature  
“ of an epidemic fever.”

It would give me great satisfaction, if I thought any thing said in the course of this work, would tend to convince the profession at large, that the cause of diseases is rarely, if ever, seated in the blood; and therefore the lavishly pouring it forth, can answer no other purpose, but to sink the strength of the patient, in many diseases never to be restored: this effect it has

beyond any evacuation we are acquainted with.

Cheyne<sup>16</sup>, who carried the use of low and regular diet farther than any modern author, very highly commends emetics in a variety of diseases both of the body and mind. In his treatise on those subjects, he says, “ I am bold to say, no operation, remedy, or antidote in physic, is so  
“ universal, speedy, and effectual as vomits, when they can be given with any  
“ safety, at least in these our northern  
“ climates. I know not the name or  
“ kind of a distemper afflicting the animal machine, where vomits are not  
“ beneficial, salutary, and of efficacy; because almost all our diseases proceed  
“ from too much, and too strong meats  
“ and drinks. It is a known fact, that  
“ Hippocrates, the father of physic, advised for prevention, the fat patients to  
“ vomit twice a month, and the lean once.  
“ Vomits not only throw off concocted

<sup>16</sup> Cheyne Dis, Body and Mind. p. 144. An. 1742.

“ impurities

“impurities directly from the stomach,  
“the Pyloris, and the glands about the  
“the abdomen and heart, (the source and  
“spring of life and motion) but by their  
“concussion and convulsion, act upon  
“the most distant veins, arteries, and  
“glands, and break open and squeeze  
“every part of the machine.--It is a seem-  
“ing frightful operation, and attended  
“with some pain and sickness to the pa-  
“tient; but it is the most beneficial and  
“salutary, and of the most immediate re-  
“lief of any operation in physic.---I can  
“think of no case wherein they cannot,  
“and ought not to be attempted and per-  
“sisted in, as the symptoms return, but an  
“hæmorage, hæmoptoe, or rupture of  
“some vessel, and even these I have  
“known perfectly cured by vomits; and  
“if a gentle, unsickening, easy manner or  
“medicine for a vomit were found, I think  
“it would be of the greatest and most  
“universal service in British physic:  
“but I fear it is contradictory: for the  
“more active and forcible they are, the  
“more

“more beneficial they will be : and I  
 “know none preferable to the Indian  
 “root, and its preparations, joined to a  
 “few grains of Tartar, or drams of wine  
 “Emetic, as the case and patient require,  
 “or a decoction of the bitter plants, and  
 “even urging with the finger or a  
 “feather, in relaxed stomach and glands,  
 “if often at a time and daily repeated,  
 “give infinite relief.”

These sentiments, though expressed in  
 a singular manner, are so consonant to  
 my ideas on the use of vomits, that I  
 could not refrain from laying them before  
 the reader at large. This author affected  
 a stile and manner differing from his co-  
 temporaries, but he was a man of pene-  
 tration, sagacity, and extensive practice ;  
 experience, I doubt not, will justify this  
 opinion of the physician, and of the me-  
 dicine.

Whytt<sup>17</sup> relates a case of convulsion  
 fits, which continued near a month, the  
 patient having sometimes eight or ten in

<sup>17</sup> Whytt's Works, p. 692. Ed. 4to. An. 1768.

a day,



a day, after trying every kind of nervous and antispasmodic medicine without effect, the complaint was perfectly cured by vomits taken every morning: they always discharged much bile.

In the most accurate and best authenticated account of the plague, that has come to my knowledge, we find vomits produced the happiest effects. It was the first remedy applied after the seizure, and “if the nausea and bitter taste in the  
“mouth was not removed by the first,  
“they gave a second, and sometimes a  
“third and fourth; nay, if the symptoms  
“were very urgent, they gave two or three  
“in the space of twelve hours, as there is  
“no time to be lost in this disease; for  
“they did not find this species of evacuation subject to the same objection as  
“brisk purging, which a man in the plague  
“is unable to support; nay, they are even  
“dangerous, although he bears brisk vomits, and a repetition of them, when  
“the nature of the case requires it<sup>18</sup>.” A

<sup>18</sup> Duncan's Com. for 1781 and 1782.

medical gentleman, who survived two attacks of this dreadful malady, began his cure with a strong vomit, and repeated it once or twice, taking in the intervals an opening ptisan, and after evacuations the bark, camphor, &c.

When this country was visited by the plague, an author of some reputation, recommends as a preservative to the poor, repeated vomits of two or three grains of Vitrum Antim. and during the contagion Salt of Vitriol, as quicker in its operation <sup>19</sup>.

The effects of vomiting on the absorbent system is very considerable, and has been noticed by many authors of eminence. Home in his Clinical Experiments, relates, that out of ten dropfical patients, seven were cured by taking dried squills, from two to eighteen grains every morning. They first purged and increased the urine, and then vomited up much watery fluid. In a few days a nausea comes on, and vomiting, often with severe pain in the stomach; during which the pulse is

<sup>19</sup> Gideon Harvey on the Plague. 1673.

remarkably

remarkably flow, but not attended with danger. It would seem here, that the pains in the stomach, and sinking of the pulse were occasioned by the deleterious quality of the squills, which in large doses, always act violently: I have seen a person fall down insensible after taking four grains, united with an opiat. The good effects, I apprehend, is produced by the action of vomiting, increasing the energy of the system in general, and therefore that medicine which operates most easy, is to be preferred <sup>20</sup>.

If emetics increase the power of absorption, by augmenting the energy of the lymphatic system; and if the hectic fever were caused by the absorption of pus from the lungs, it would necessarily follow, that when these medicines are given frequently in Phthisis Pulmonalis, the violence of the hectic fever would of course be increased. That emetics do not aggravate the symptoms of fevers in general, I hope the evi-

<sup>20</sup> The reader may consult Millman on the Dropsy.  
1779.

dence I have brought in their favor, will sufficiently prove to the satisfaction of the reader; and that they do not augment the pulmonary hectic, I must request my word may be taken, till it is refuted, or confirmed by experience.

In the preceding work, I have recommended the Pulv. Ipecac. to be taken in small doses, every morning, so as to excite vomiting once or twice, not oftener, according to the symptoms, in all kinds of coughs or disorders of the breast, commonly supposed to originate from cold. It has been objected, that giving vomits so frequently, would destroy the tone of the stomach, and be attended with other bad consequences. For the instruction of such critics, whom I would advise to read before they write, I shall produce an opinion which will fully prove the safety, and confirm the efficacy of the practice.

In a paper on the use of Ipecacuanha, written by a late learned and eminent physician, he thus expresses himself, “But  
“ when there is nothing, in the particular  
“ case,

“ safe, which can render the repeated ac-  
“ tion of vomiting unsafe or improper, I  
“ know of no medicine so effectual, for  
“ removing the spasmodic asthma, as Ipe-  
“ cacuanha; which I have now for sever-  
“ ral years been accustomed to give with  
“ this intention. Where I have found the  
“ patient in a violent paroxysm, I have  
“ ordered a scruple of Ipecacuanha to be  
“ instantly administered; which failed not  
“ to procure great and immediate relief.  
“ But in prescribing for the chronical or  
“ habitual indisposition, I give from three  
“ to five grains every morning, or from  
“ five to ten grains every other morn-  
“ ing, according to the degree of the  
“ disease, and without particular regard  
“ to any paroxysm: in which method  
“ I have sometimes persisted for *a month*  
“ *or six weeks together*. And though the  
“ patients are apt at first to complain  
“ both of the nauseousness and fatigue at-  
“ tending it; yet, after a little experience,  
“ I have found them willing to acquiesce  
“ in it, or, where it had been laid aside,  
“ desirous



“ desirous to return to it. In a dose of five  
 “ grains, the medicine generally acts as an  
 “ emetic : on some persons, however, it  
 “ has not that effect, nor produces any  
 “ alteration on the stomach beyond mere  
 “ sickness ; which of course more fre-  
 “ quently, indeed almost always, happens  
 “ when only three grains are given. Yet  
 “ in those instances I have found the me-  
 “ dicine equally useful as in those where  
 “ the same dose of it proved emetic. So  
 “ that the relief, which it brings to the  
 “ asthma, does not depend on the action  
 “ of vomiting, but seems owing to that  
 “ general antispasmodic or relaxing pro-  
 “ perty which, as I have elsewhere in-  
 “ deavoured to shew, belongs to Ipeca-  
 “ cuanha, and of which its emetic ope-  
 “ ration itself appears with great proba-  
 “ bility to be a particular consequence<sup>21</sup>.”

<sup>21</sup> Akenfide Med. Trans. Vol. I. An. 1772.

“ Neque id satis est : vomitus etiam, si pituita tenax  
 “ pulmonem aut ventriculum gravat, apprime utilis est ;  
 “ et is quidem frequenter repetitus.”

Mead Mon. et Prec. Med. de Asthmate. An. 1751.

I have

I have frequently given the Ipecacuanha, both in the spasmodic and humoral asthma, but never perceived any benefit from its use except when it occasioned, vomiting, and the same relief has been found from Tart. Emet. operating in a similar manner. It therefore appeared to me, that the good effects of this medicine proceeds from the action of vomiting, and not from any antispasmodic, relaxing quality inherent in the Ipecacuanha; when the disease is purely spasmodic, and not of the mixed kind as is generally the case, exciting sickness in the stomach, as it introduces a new stimulus to the system, may by the consent of parts give some degree of relief; but not equal to what is produced by vomiting. In the hooping cough, which is also supposed to be a spasmodic disease, the same relief is experienced whether the Ipecacuanha or Emet. Tart. is given to produce vomiting.

The celebrated fever powder of the late Dr. James, I have been in the habit  
of

of giving for many years, in complaints of the inflammatory kind; and always found it had the best effect when it occasioned vomiting and afterwards purged, as if one were a necessary consequence of the other: but when it acts in neither way, seldom any relief is found from its use.

I have sometimes seen it given in large doses, without the least apparent operation, or effect; and in one case of fever, the stomach was in such a state as not to be susceptible of being acted upon by antimonials; the powder being totally inert, and the Tart. Emet. running off by the bowels. But after the patient had been vomited with Ipecacuanha, given indeed in a larger quantity than usual, the powder in a moderate dose occasioned sickness, vomiting, and purging, by which the disease was removed. From some cases of this kind that have occurred to me, I have no doubt, but Ipecacuanha will act upon the stomach when antimonials will not, (why, I cannot tell) and  
when

when its atony is removed, other medicines will have their proper action.

I could with ease produce many other authorities for the efficacy of Emetics, considered as a general remedy; but presume the number will be thought fully sufficient. I shall now endeavour to support the reasoning used in recommending them in diseases of the lungs, by considering the state those parts have been found in, when the disease has proved fatal: and this I shall prefer doing from the works of others, rather than from my own observation.

Home in his Clinical Experiments, relates a case of the measles, in which the patient died the fifteenth day of the eruption, which appeared the sixth day from the seizure. On opening the body, the trachea was found *full of purulent matter*, but no ulceration, whence it could have proceeded, was perceived. Admitting this to be really purulent matter, which is not improbable, it must have been produced by secretion, and not by suppuration.

On

On the day before death, the patient was vomited with Tart. Emet. but the Doctor doubts whether it was continued long enough. From the uncertainty as to the operation, I should rather be disposed to believe, that the patient did not vomit, for if he had, the trachea could not have remained filled with matter, and the quantity could not be secreted in so short a time, as between the operation and the patients death.

In Morgagni we have a case related similar to the above, and which he says was the first of the kind that had been discovered. A virgin, forty years of age, having been for a long time asthmatic, and having her voice much diminished, was supposed by her physicians, beyond a doubt, to have a disorder of the lungs, when the asthma attacking her very vehemently, she suddenly died. On dissecting the body, the contents of the abdomen, thorax, and cranium were found free from any mark of disease; but upon laying open the posterior part of the larynx in a longitudinal direction,



direction, there was found a white pus, degenerating into a cineritious colour, and of a poultice-like consistence, formed into the shape of a cork, intirely shutting up the cavity of the larynx, that lies below the glottis; and in that place the coat investing the larynx was ulcerated, as it was in like manner, where it covered some of the nearest annular cartilages of the trachea arteria, although here more slightly<sup>22</sup>.

A learned professor, in his first lines of

<sup>22</sup> “ Virgo igitur de qua modo dicebam, annos nata  
 “ ad quadraginta, jam diu asthmatica, imminuta insuper  
 “ voce, a Medicis procul dubio ex pulmonibus laborare  
 “ credebatur, cum acius asthmate ingruente, de impro-  
 “ viso mortua est.—In thorace autem ipsisque pulmoni-  
 “ bus nihil omnino vitii; ut jam omnes intra cranium  
 “ morbi causam repertum iri, putarent. Sed et ibi  
 “ recte constituta inventa sunt omnia.—Quam ubi a tergo  
 “ secundum longitudinem incisam, (laryngem) diduxi,  
 “ continuo manifestum fuit quod quærebamus. Pus  
 “ enim ex albo cinereum, et quasi pultaceum, formatum  
 “ in obturamenti modum, occludebat penitus cavum  
 “ laryngis quod infra glottidem est: eoque loco tunica  
 “ laryngem convestiens erat exulcerata, quemadmodum  
 “ et proximos annulos aliquot Tracheæ arteriæ operiebat;  
 “ quanquam hic levius.

Morgagni caus. et sed. Morb. Epist. 15. Art. 13.

An. 1761.

Z

practice,

practice, when treating of the Cynanche Trachialis, says, “ That when it ends fatally, it is by suffocation; seemingly, as we have said, depending upon a spasm affecting the glottis; but sometimes probably depending upon a quantity of matter *filling the* bronchia (a)---In some persons who have died after labouring under pneumonic inflammation for a few days only, the bronchiæ have been found *filled with a considerable* quantity of a ferous and thickish fluid, which I think must be considered rather as a ferous effusion, having had its thinner parts taken off by respiration, than as pus so suddenly formed in the inflamed part (b). ---It would appear, that the effusion into the bronchiæ, which we have mentioned, often concurs with the effusion of red blood in occasioning the suffocation, which fatally terminates pneumonic inflammation; that the effusion of serum alone may have this effect; and that the serum poured out in a certain

(a) Cullen first lines, § 329.—(b) § 348. Ed. 4. An. 1784.

“ quantity,

“ quantity, rather than any debility in the  
 “ powers of expectoration, is the cause of  
 “ that ceasing of expectoration which very  
 “ constantly precedes the fatal event. For  
 “ in many cases the expectoration has  
 “ ceased, when no other symptoms of de-  
 “ bility have appeared, and when *upon dis-*  
 “ *section the bronchiæ have been found full of li-*  
 “ *quid matter.* Nay, it is even probable,  
 “ that in some cases, such an effusion may  
 “ take place without any symptoms of vio-  
 “ lent inflammation; and, in other cases,  
 “ the effusion taking place, may seem to  
 “ remove the symptoms of inflammation  
 “ which had appeared before, and thus  
 “ account for the unexpected fatal termi-  
 “ nation which have sometimes happened.  
 “ Possibly this effusion may account also  
 “ for many of the phænomena of the pe-  
 “ ripneumonia notha. (c) But further, as  
 “ pneumonic inflammation very often pro-  
 “ duces an effusion of serum into the bron-  
 “ chiæ, so this, in elderly persons may oc-  
 “ cur in a slight degree of inflammation;

(c) Cullen first lines, § 350.

Z 2

“ and

“ and when it does happen, will give the  
 “ exquisite and fatal cases of the peripneu-  
 “ monia notha<sup>23</sup>. ”

These cases throw so strong a light upon the propriety of the method of treatment, I have been labouring to inculcate in diseases of the breast, that I thought it my duty to lay them at length before the reader.

When by the difficulty of breathing, and other symptoms, we are led to apprehend, that such an effusion, as related by the learned professor, has taken place in the bronchia, is there in the whole materia medica, a remedy of such certain efficacy as an emetic? or is there any other means, any resource in art, that we can depend upon, or that has the power of removing the matter so effused? Certainly there is none. And in the preceding cases, the authenticity, and exactness of which cannot be doubted, had emetics been used properly either in the beginning or progress of the disease, or even when the dif-

<sup>23</sup> Cullen first lines, § 380. Ed. 4. An. 1784.



difficulty of breathing succeeded to the seeming termination of the inflammation; I believe every unprejudiced mind will agree with me, that if the removal of the effused matter could have saved the patient's lives, there is every reason to think the fatal events would not have taken place.

In diseases of the contents of the thorax, it is not easy to determine with precision, what part is principally affected<sup>24</sup>; and in great difficulty of breathing, except when attended with a rattling noise in the throat, it is not possible to ascertain, that no such effusion of matter has taken place, and when it does to a certain extent, we have seen it prove mortal. In such cases, supposing we did know by the bubbling, rattling noise in their breathing, mentioned

<sup>24</sup> “ Vix ullum in corpore toto particulum supereffe,  
 “ cujus non aliquæ in negotio *respirationis* partes sint,  
 “ *et illud verissime subjicit*, summam in morbis difficul-  
 “ tatem facere magnum numerum organorum, quæ ad  
 “ actionem concurrunt, et quorum aliquod læsum totam  
 “ functionem turbat, cum interim difficilimum sit scitu,  
 “ quæ ex toto numero proprie læsa sit.”

Boerhaav. Præl. ad Instit. § 601.



by Morgagni<sup>25</sup>, when the effusion of matter began, and was gradually filling up the bronchiæ, I would ask the opposers of emetics in diseases of the lungs; I would ask the learned professors, what means they would propose to evacuate the matter with certainty? On this question it has appeared, the life of the patient depends, and it surely then requires and deserves our utmost deliberation. Probably, expectorants, balsamics, pectorals, blisters, fumigations, opiates, caustics, purges, &c. as is the common practice, would be respectively tried. What effects would these medicines produce in discharging that matter, or serous fluid, gradually accumulating to the extinction of life? They would amuse the patient, and their friends, but they would leave the disease to proceed uninterrupted to its fatal termination.

The learned professor is of opinion, that *full vomiting* in *pneumonic inflammation* is a dangerous practice. As it would give me

<sup>25</sup> Morgagni caus. & sed. Morb. Ep. 13. Art. 4.

much concern to have a name so formidable in the medical world, stand in direct opposition to the treatment of pulmonary complaints I have been recommending: I shall take the liberty, by selecting such sections as relate immediately to the subject, to make it appear, that he is not uniform in his disapprobation of emetics in diseases of the contents of the thorax, attended with inflammation.

“ Under this title (Pneumonic Inflammation) I mean to comprehend the whole of the inflammations affecting either the viscera of the thorax, or the membrane lining the interior surface of that cavity: for neither do our diagnostic serve to ascertain exactly the seat of the disease; nor does the difference in the seat of the disease exhibit any considerable variation in the state of the symptoms, nor lead to any difference in the method of cure<sup>26</sup>.” Treating of the method of cure, he says, “ To excite *full vomiting by emetics*, I judge to be a dangerous prac-

<sup>26</sup> Cullen first lines, § 334.

“ tice in this disease : but I have found it  
 “ useful to exhibit nauseating doses ; and  
 “ in a somewhat advanced state of the dis-  
 “ ease, I have found such doses prove the  
 “ best means of promoting expectora-  
 “ tion <sup>27</sup>.” When treating of the peripneu-  
 monia notha, he says, “ The cough of-  
 “ ten becomes frequent and violent ; is  
 “ sometimes accompanied with a rending  
 “ head-ach ; and, as in other cases of  
 “ cough, a vomiting is sometimes excited  
 “ by it. The face is sometimes flushed,  
 “ and some giddiness, or drowsiness, of-  
 “ ten attends the disease. A difficulty of  
 “ breathing, with a sense of oppression, or  
 “ straitening in the chest, with some ob-  
 “ scure pains there, and a sense of lassitude  
 “ over the whole body, very constantly  
 “ attend this disease. The blood drawn  
 “ in this disease shews a buffy surface,  
 “ *as in other inflammatory affections* (a).” And  
 again, “ A catarrh, however, is strictly an  
 “ affection of the mucus membrane and  
 “ follicles of the bronchiæ alone : *but it*

<sup>27</sup> Cullen first lines, § 371. (a) § 379. Ed. 4. An. 1784.

“ may

“ *may readily have, and frequently has, a degree*  
 “ *of pneumonic inflammation joined to it ; and*  
 “ *in that case may prove more properly*  
 “ *the peculiar disease we treat of here.*”  
 (i. e. Peripneumonia Notha<sup>28</sup>.)

The peripneumonia notha is therefore an inflammatory disease, affecting the viscera of the thorax ; attended sometimes with fever, with cough, difficulty of breathing, and many of the symptoms of pneumonic inflammation ; in the cure of which, he says, “ In all cases the remedies chiefly to be depended upon, are vomiting and blistering. *Full vomiting* may be *frequently repeated*, and nauseating doses ought to be *constantly employed*(a).”

Treating of the Catarrh in old people, who have the natural mucus of the lungs poured out in greater quantity. “ If therefore a catarrh happen to such persons, and increase the afflux of fluids to the lungs, with *some degree of inflammation*, it

<sup>28</sup> Cullen first lines, § 380. (a) § 381.

“ may



“ may produce the *peripneumonia notha*,  
 “ which in such cases is very often fatal <sup>29</sup>.”

Cure. “ For restoring the determination of  
 “ the fluids to the surface of the body, and  
 “ at the same time for expediting the secre-  
 “ tion of mucus in the lungs, which may  
 “ take off *the inflammation of its membrane* ;  
 “ *vomiting is the most effectual means (a).*”

As a general remedy, his sentiments are more favorable, “ Vomiting is in many  
 “ respects useful in fevers ; as it evacuates  
 “ the contents of the stomach ; as it  
 “ emulges the biliary, and pancreatic  
 “ ducts ; as it evacuates the contents of  
 “ the duodenum, and perhaps also of a  
 “ larger portion of the intestines ; as it  
 “ agitates the whole of the abdominal  
 “ viscera, it expedes the circulation in  
 “ them, and promotes their several secre-  
 “ tions ; and lastly, *as it agitates also the*  
 “ *viscera of the thorax* it has like effects  
 “ there. It determines to the surface of  
 “ the body, not only by the exercise of

<sup>29</sup> Cullen first lines, § 1056. (a) § 1066.

. “ vomiting



“ vomiting in agitating the whole frame ;  
 “ --but to the particular operation of eme-  
 “ tics upon the muscular fibres of the sto-  
 “ mach, whereby they excite the action of  
 “ the extreme arteries on the surface of  
 “ the body, and thereby effectually to de-  
 “ termine the blood into those vessels, re-  
 “ move the atony, and take off spasms  
 “ affecting them <sup>30</sup>.”

Criticism is no part of my plan, nor shall I attempt to reconcile the sense of these opposing passages ; it is sufficient for the present purpose, to prove from the learned professor's own words, that he does allow the expediency and absolute necessity, *of frequent and full vomiting* in a disease of the thorax, attended with inflammation of its contents and their membranes. And even the nauseating doses (of antimonials) which he so frequently recommends, in pneumonic inflammations, will frequently, especially when first given, vomit, and sometimes to

<sup>30</sup> Cullen first lines, § 172, 173.

a very considerable degree, or in the author's words *full*, however cautiously the dose may be proportioned to the age and situation of the patient. Indeed, such is the uncertainty in the operation of antimonial medicines, and of Tartar Emetic in particular, that I believe no physician will undertake to determine, that any dose will, or will not vomit, till its effects have been tried on the constitution. In delicate, irritable habits, the smallest portion will operate, whilst in others, no quantity whatever (that can be given with safety) will act upon the stomach <sup>31</sup>.

As it appears from the Professor's general practice, that *full vomiting*, in diseases of the lungs, is not attended with danger; I trust it will be evident, that gentle vomits, the only kind I recommend, produce in diseases affecting the contents of the tho-

<sup>31</sup> “ He took four vomits, with each *four grains of the Tart. Emet.* in the infusion of a drachm of Ipecac. in one week, in vain: none of them working to any purpose.”

Woodward's Cases by Templeman, p. 117. An. 1757.

rax, and the membranes lining its interior surface, the most beneficial effects; and that in some cases, they are the only means capable of relieving the patient, and rescuing him from inevitable death. But against the general voice, against opposition arising from various causes, I scarcely can expect my feeble voice should prevail; or that any argument I can use, should stand in competition with those of the eminent author. Yet let me request the profession will, for a moment, divest their minds of prejudice and predilection for the farrago of oils, balsams, and pectorals, and when they cannot with these compositions, discharge the accumulation of matter in the lungs and bronchiæ, or relieve obstinate coughs and difficulty of breathing, let them give emetics, in the manner recommended in the foregoing Essay, a fair trial; should they fail in producing relief, the patient will not be in a worse state than he was before. Experience has fully convinced me, not only of their safety, but of their great efficacy in such complaints;

plaints ; and by that test, let the method of treatment stand or fall.

In the epidemic Catarrh, or Influenza, that spread all over Europe in the spring of the year 1782, I observed very considerable relief from vomits frequently given. They appeased the troublesome cough, and generally produced a salutary moisture on the skin. In a very accurate and intelligent account of that disease, drawn up from the papers of many physicians and practitioners, transmitted for that purpose, lately published, the effects of emetics, among other remedies are thus noticed : “ Emetics do not appear to  
 “ have been very generally used, but all  
 “ who did employ them, concur in opinion,  
 “ that they were of great service,  
 “ not only where there was reason to  
 “ suspect an accumulation of mucus in  
 “ the bronchial ramifications, but also  
 “ where they were given chiefly with a  
 “ view to assist in producing a speedy  
 “ and copious respiration<sup>32</sup>.” The fol-

<sup>32</sup> Dr. Gray in Med. Commun. p. 35. An. 1784.

“ lowing

lowing authorities are subjoined in the notes.

“ In two or three cases of extreme danger, when the collected phlegm threatened suffocation, gentle emetics seemed to rescue them from death.”---Dr. Cleg-horn, Dublin.

“ Emetics gave great relief to all the symptoms.”---Dr. Flint, St. Andrews.

“ An emetic early administered, and followed by frequent draughts of warm diluting liquors, seldom failed of promoting a profuse perspiration, which if properly kept up in bed, removed the whole disease in a few days.”---Dr. Macqueen, Great Yarmouth.

“ Emetics given early, contributed greatly to the speedy recovery of the patient.”---Mr. Henry, Manchester.

“ An emetic, and promoting moderate perspiration, appeared to answer best to bring about an easy and speedy termination of the disease.”---Dr. Houlston, Liverpool.

“ Emetics



“ Emetics at first, and afterwards anti-  
“ monials, relieved very much. In some  
“ cases I found a repetition of the emetic  
“ two or three times of great service.”---  
Mr. Newell, Colchester.

In the advanced period of the confluent small-pox, when the patient is nearly strangled with tough viscid phlegm and purulent matter, lodged in the bronchiæ, and surrounding the epiglottis, I have frequently by an emetic, evidently snatched them from the brink of the grave. And when I attend from the beginning of the disease, I always keep the throat clear by this means, and thereby not only prevent the offensive putrid matter being swallowed and retained in the stomach and intestines, but very often reduce the confluent to a distinct kind, preventing the secondary fever, and leaving the tongue clean at the crisis. The usual method in such cases, is gargling and syringing the throat; and I need not inform the intelligent reader how troublesome, and how ineffectual

tual those means are to the end desired<sup>33</sup>.

That emetics should by their powerful action on the system in general, remove obstructions in the glands and secretory organs, or alter the quality of their secretions, is very readily conceived, and we can form some idea in what manner those effects are produced: but in other diseases, which at first sight, and especially to those unacquainted with medical subjects, must appear extraordinary; we can form no satisfactory theory of their operation.

<sup>33</sup> “ Et profectò ubi eò res rediit ut æger singulis  
 “ momentis à suffocatione periclitetur, stupore obrutus,  
 “ et spiritu ferè undiquâque præcluso, non satis tutò huic  
 “ remedio fiditur: Ægro ita ad incitas redactò Emeticum  
 “ peropportunè ac feliciter nonnunquam exhibui ex *In-*  
 “ *fusione Croci Metallorum*, sed dosi paulo majori. Scil. *ad*  
 “ *Ziss*; quando, ob eximiam quâ laborat æger stupidi-  
 “ tatem, minor dosis haudquaquam operabitur, atque  
 “ interim eos exagitando humores quos nequeat educere,  
 “ ægrum in magnum vitæ discrimen conjiciet.”

Syden. Var. Reg. An. 1667, 68 & 69. Op. Un. p. 121.

A a

In

In Uterine Hæmorrhages, particularly that which takes place about the cessation of the menses, an eminent professor of midwifery, constantly recommends emetics in his public lectures, as a safe and efficacious remedy <sup>34</sup>.

In hæmoptysis, or spitting of blood from the lungs, vomiting acts as a powerful styptic. “ And I have myself often directed vomits in bleeding (hæmoptysis) caused by the erosion of Ichor, and observed them sometimes of service, but never any hæmorrhage increased thereby <sup>35</sup>.”

In

<sup>34</sup> Dr. Osborn.

Cullen first lines, § 796. Ed. 4. 1784.

Bryan Robinson on Med.

<sup>35</sup> Cloffy Obs. p. 60. An. 1763.

In a case of hæmoptoe, attended with bilious complaints, in which strong vomits were taken repeatedly, always with relief, but they never brought on the spitting of blood. “ He has sat down, to take a strong vomit, so weak, so feeble, and dispirited, that they who looked on were apprehensive he would not have strength to go through it. Whereas he rose, after the operation,

In Hæmorrhages I perfectly agree with this author, that emetics should be used with great caution, and not till other means have been tried; for in applying remedies out of the common beaten path of practice, it is necessary we should have the approbation, not only of the patient, but of those who are interested in his recovery, “*Ne videaris occidisse quem servare non potes.*”

From the sentiments of the authors I have quoted, and others, the reader may consult<sup>36</sup>, it would appear, that the action of

“ operation, ever much refreshed, and with his strength  
 “ sensibly raised.—No vomits ever hurt him—spitting of  
 “ blood foreseen, and prevented by a vomit.”

Woodward's Cases by Templeman, p. 116, & seq.

An. 1757.

<sup>36</sup> “ *Etenim vomitus pituitam inanit, caput levat, et*  
 “ *ne qui avidius nonnunquam cibum ingesserint, crudi-*  
 “ *tate laborent: item ne qui vinum liberalius sumpserint,*  
 “ *offendantur, prohibet.*”

Paul. *Ægenit.* lib. 1. p. 42. Lugd. 1567.

*Ibid.* lib. 1. c. 7. *Ibid.* in *Morb. Ventric.* cap. 68.

*Ibid.* de *Choler.* lib. 3. c. 39.

“ Tussis

of vomiting is not confined merely to evacuating the contents of the stomach, but

“ Tussis infantum ferè semper esse solèt à stomacho  
 “ cruditatibus scatente, quo in casu semper stomacho re-  
 “ spiciendum, non posthabitis tamen pectoris remediis.”

Baglivi, p. 114. An. 1636.

“ Si vitio stomachi oritur hæctica, convenit ante om-  
 “ nia vomitorium blandum instituere, si vires adhuc  
 “ sunt validæ. Audiendum hic est *Lindani* consilium,  
 “ dum inquit : in curatione hæcticæ statim ad partis af-  
 “ fectæ cognitionem incumbere oportet, qua cognita ego  
 “ facilius hæcticam quam quartanam curabo ; oriuntur  
 “ enim plerumque ex vitio stomachi. Sic (inquit) cu-  
 “ ravi uno vomitorio, et hinc cum elixir proprietatis,  
 “ hæcticam intra 4 dies.”

Etmuler. Colleg. Pract. p. 314. An. 1671.

“ Si vero pus cæperit per stomachum vomitu purgari,  
 “ adjuvare excretionem oportebit vomitoriis medica-  
 “ mentis.”

Prosp. Alp. Med. Meth. lib. 8. p. 500. An. 1719.

Woodward's State of Physic and Diseases, p. 1. An.  
 1718.

Woodward's Cases by Templeman, p 52. 155. 157.  
 172. 300. 375.

“ Gentle vomits and purges frequently repeated, are  
 “ particularly useful in beginning indolent obstructions  
 “ of the abdominal viscera.”

Whytt, p. 670. 4to. Ed. An. 1768.

that



that it agitates and removes obstructions in the abdominal viscera, and in the contents of the thorax; increases or renews the powers of the absorbent system; opens obstructions in the cutaneous pores, and acts in general upon the system, so as to increase, what has been termed the *vis medicatrix natura*, or that power in the human body always striving to restore health. There are few diseases in which this remedy may not be given and repeated with safety and success; and perhaps, when we have by these and other appropriated means, removed every kind of offending matter from the stomach and intestines, we have made a very considerable progress in the cure of the disease.

Among the cases in which emetics are improper, may be reckoned every kind of Hernia; scirrhus affections and inflammation of the stomach; Nephritis; and although it is a general practice to give them during pregnancy, (as observed in Chap. 7.) yet it should be done with great  
caution

caution and circumspection. Many other cases will occur in practice, in which from various causes emetics will be improper; of these the judicious physician will be a competent judge, and as this work is not meant to preclude his advice, any farther directions will be unnecessary.

If the arguments I have drawn from the works of authors of the first reputation in the profession, shall convince the reader that emetics have been used in every age, and in almost every disease; and that they may be repeated every day, for any length of time, without injury to the stomach, but with great benefit to the general health; I trust it will not only remove the objections that have been made to the method of treatment recommended in the foregoing Essay, but confirm the propriety of the practice. Should that be the case, men of liberal minds, anxious for the improvement of the science, will not hesitate  
in

in giving the medicine the fair trial I have solicited; and I flatter myself the frequent use of emetics, will be found to shorten the period of the disease, to relieve the sick from a load of nauseous unavailing medicines, and to give that satisfaction and reputation to the physician, more valuable than the accumulation of riches.

F I N I S.

## E R R A T A.

- P. 4. Note, for Symmonds, *r.* Simmons, and the same throughout.
112. l. 5. for pebulum, *r.* pabulum.
130. l. 12. Note, after vena, *r.* secta.
146. l. 6. for excuse, *r.* course.
194. Note, for Aikenfide, *r.* Akenfide.
245. Note, l. 13. for mortes, *r.* mortis.
- 16. for exilialis, *r.* exitialis.
250. l. 23. *dele* the.
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*N. B.* The Author will think himself honoured in receiving any information on Consumption in general; and particularly on the method of treatment recommended in the foregoing Essay.













